



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

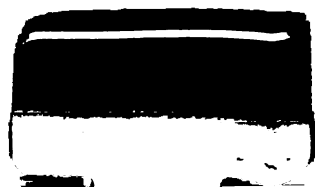
We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

LIBRARY
UNIVERSITY OF CALIFORNIA
DAVIS



U. S. WAR DEPARTMENT

Annual Reports, 1919

(IN THREE VOLUMES)

Volume III

Reports of the

CHIEF, BUREAU OF INSULAR AFFAIRS, 1919

GOVERNOR OF PORTO RICO, 1919

PHILIPPINE COMMISSION, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

372A

ARRANGEMENT OF THE ANNUAL REPORTS OF THE WAR DEPARTMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1919.

VOLUME I (in four parts).

PART 1.

Secretary of War.
Chief of Staff.
The Adjutant General.
Commander in Chief, American Expeditionary Forces.
Inspector General.
Judge Advocate General.
Quartermaster General.
Chief Signal Officer.

PART 2.

Surgeon General.

PART 3.

Surgeon General (continued).

PART 4.

Chief of Ordnance.
Chief of Militia Bureau.
Chief of Coast Artillery.
Chief of Construction Division.
Director Tank Corps.
Director Chemical War Service.
Director Real Estate Service.
Board of Ordnance and Fortification.
Director National Defense.
Chief Motor Transport Corps.
Chief Transportation Service.
Chief Field Artillery.
Chickamauga and Chattanooga Park Commission.
Gettysburg Park Commission.
Shiloh Park Commission.
Vicksburg Park Commission.

VOLUME II.

Chief of Engineers (without Appendices).

VOLUME III.

Chief of Bureau of Insular Affairs.
Governor of Porto Rico.
Governor General of the Philippines, 1918.¹

¹ This report is printed for calendar instead of fiscal year.

CONSOLIDATED CONTENTS.

REPORT OF THE CHIEF, BUREAU OF INSULAR AFFAIRS, 1919.

INDEX.

REPORT OF THE GOVERNOR OF PORTO RICO, 1919.

List of acts passed by the Ninth Legislative Assembly.

List of appointments by the Governor.

Personnel of Insular Police Force.

List of franchise ordinances passed by the Public Service Commission.

Statistical data concerning civil service operations.

Report of the Executive Secretary.

Report of the Commissioner of Health.

Report of the Auditor and consolidated financial exhibits.

Report of the Treasurer.

Report of the Commissioner of the Interior.

Report of the Commissioner of Education.

Report of the Attorney General.

Report of the Commissioner of Agriculture and Labor.

Report of the Food Commission.

INDEX.

REPORT OF THE GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS, 1918.

Report of the Governor General.

Report of the National Coal Co.

Report of the Secretary of the Interior.

Report of the Department of Mindanao and Sulu.

Report of the Secretary of Public Instruction.

Report of the Secretary of Finance.

Report of the Secretary of Justice.

Report of the Secretary of Agriculture and Natural Resources.

Report of the Department of Commerce and Communications.

INDEX.

**REPORT OF THE CHIEF OF THE BUREAU OF
INSULAR AFFAIRS**

CONTENTS.

	Page.
Letter of transmittal	5
Personnel	6
Appendix	7
Philippine Islands	7
Total foreign trade.....	7
Manila hemp shipments.....	7
Coconut oil shipments.....	7
Sugar shipments.....	8
Cigar shipments.....	8
Leaf tobacco shipments.....	8
Copra shipments.....	8
All other shipments.....	9
Bonded indebtedness.....	9
Certificates of indebtedness.....	9
Railway bonds.....	10
Currency reserve fund.....	10
Paper currency.....	10
Silver coinage.....	10
Insular receipts and disbursements.....	11
Porto Rico	11
Commerce	11
Total foreign trade.....	11
Sugar shipments.....	12
Coffee shipments.....	12
Leaf tobacco shipments.....	12
Cigar shipments.....	12
Fruit and nut shipments.....	13
All other shipments.....	13
Receipts and expenditures.....	13
Bonded indebtedness.....	14
Dominican customs receivership	14
Statement of customs receivership.....	15
Statement of sinking fund.....	15

REPORT
OF THE
ACTING CHIEF OF THE BUREAU OF INSULAR AFFAIRS
TO THE
SECRETARY OF WAR.

WAR DEPARTMENT,
BUREAU OF INSULAR AFFAIRS,
Washington, June 30, 1919.

SIR: On the date of the last annual report, June 30, 1918, the United States was engaged chiefly in the war. Since that time, aside from its regular work, which has in no sense diminished, the bureau has been called upon to solve the many difficult problems referred to in the preceding annual report. The period during which the United States was at war was a prosperous one in both the Philippine Islands and Porto Rico, marked with the usual civic progress, but after the signing of the armistice an adjustment of the economic situation was necessary. There is nothing to indicate, however, that conditions will not soon return to a normal state. The people of the islands, for their loyalty to the United States during the war, their heartfelt patriotism, and their determined support of our war policies, are worthy of our deep gratitude and appreciation.

There has been a shortage in the rice crop in the Philippines, and to prevent a famine the legislature enacted a law placing an embargo on the exportation of rice.

There was a severe epidemic of influenza in the Philippines Islands during the past year. Smallpox and cholera were also prevalent, but the sanitary measures taken by the government brought these diseases under control, and it is hoped and believed that they will eventually be stamped out.

During the year 1918 Porto Rico was the victim of an earthquake disaster and a severe influenza epidemic. On October 11 a severe earthquake, followed by a tidal wave, resulted in the loss of more than 100 people and the destruction of property valued at more than \$4,000,000. Relief work was immediately begun by the insular government, assisted by the military authorities and the Red Cross,

the latter donating \$10,000. On October 24 another earthquake occurred, but the loss of both life and property was very slight. On November 6 an epidemic of influenza was reported by the governor. The number of available physicians and nurses was inadequate to cope with the situation, and the disease spread rapidly, the climax being reached about November 28, when 100,000 cases and between 3,000 and 4,000 deaths were reported. The legislature appropriated \$500,000 to combat the disease. The Red Cross, in addition to rendering every possible assistance, donated \$30,000 for relief work, and the military authorities loaned hundreds of cots, furnished clothing, supplies, etc. Great credit is due the Army and the Red Cross for the aid and assistance rendered during these trying times.

To make this report as brief as possible, the many ramifications and angles of the work of the bureau are not touched upon, but appended hereto will be found the usual statistical tables.

PERSONNEL.

During the past year the changes in officers appointed by the President to the insular service were as follows:

Resigned.—Fred C. Fisher, associate justice of the Supreme Court of the Philippine Islands, November 15, 1918; Clifford H. French, auditor of the Philippine Islands, December 31, 1918.

Appointed.—Percy M. Moir, associate justice of the Supreme Court of the Philippine Islands, November 15, 1918; Irving B. Dexter, auditor of the Philippine Islands, January 1, 1919; Paciano Dizon, deputy auditor of the Philippine Islands, January 27, 1919.

The bureau has been deprived of the services of Gen. McIntyre since July 8, 1918, when he was detailed as Assistant Chief of Staff, and his absence has been keenly felt.

Reference has been made in previous reports to the loss of faithful civil service employees. This year has been no exception. Since the United States entered the war no less than 42 clerks have left the bureau to accept positions paying better salaries. The loss of a majority of the older and experienced clerks has been severely felt, and while sacrifices have been made to keep the work up to date, some of it has fallen in arrears, and to get along an increased force will be necessary. This has been covered in the estimates which have been submitted. The present clerical force, however, is worthy of special commendation for its devotion to duty and its untiring efforts to bring the work up to date.

CHAS. C. WALCUTT, JR.,
Colonel, U. S. Army, Acting Chief of Bureau.

The SECRETARY OF WAR.

APPENDIX.

PHILIPPINE ISLANDS.

TOTAL FOREIGN TRADE.

Twelve months ending Dec. 31—	Consignments.			Shipments.		
	From United States.	From other countries.	Total.	To United States.	To other countries.	Total.
1909.....	\$6,445,331	\$24,639,088	\$31,084,419	\$14,726,513	\$20,197,824	\$34,924,337
1910.....	20,068,542	29,650,819	49,719,361	17,241,725	23,386,738	40,628,463
1911.....	19,156,987	28,867,420	48,024,407	19,827,030	24,760,261	44,587,291
1912.....	24,309,010	37,358,941	61,667,951	22,814,239	31,970,500	54,784,739
1913.....	26,676,261	26,636,525	53,312,786	16,434,018	31,338,938	47,772,956
1914.....	24,020,395	24,568,258	48,588,653	24,427,710	24,261,924	48,689,634
1915.....	26,381,069	22,931,115	49,312,184	23,653,211	30,159,793	53,813,004
1916.....	22,862,673	22,633,665	45,496,338	35,648,183	34,289,050	69,937,183
1917.....	37,620,648	28,176,383	65,797,031	63,234,359	32,369,948	95,604,307
1918.....	58,824,611	39,774,601	98,599,212	89,146,918	46,047,564	135,194,482

MANILA HEMP SHIPMENTS.

Twelve months ending Dec. 31—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per ton.	Quantity.	Value.	Value per ton.
	<i>Long tons.</i>			<i>Long tons.</i>		
1909.....	165,299	\$16,896,000	\$102	99,928	\$10,434,041	\$104
1910.....	160,596	16,475,311	103	74,335	8,397,310	113
1911.....	146,209	14,520,127	99	62,924	6,802,790	108
1912.....	172,311	22,075,671	128	74,803	10,779,187	144
1913.....	117,928	21,121,094	179	46,400	9,787,216	211
1914.....	114,547	19,194,815	168	49,348	9,619,376	195
1915.....	139,767	21,339,100	153	68,157	11,351,283	167
1916.....	135,147	26,691,989	198	65,296	13,639,509	209
1917.....	166,758	46,807,780	281	94,070	29,645,548	315
1918.....	166,586	58,191,550	349	85,452	32,734,201	383

COCONUT OIL SHIPMENTS.

Twelve months ending Dec. 31—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per pound.	Quantity.	Value.	Value per pound.
	<i>Long tons.</i>		<i>Cents.</i>	<i>Long tons.</i>		<i>Cents.</i>
1909.....						
1910.....			\$16			
1911.....			11.51			
1912.....	1	40	2.75			
1913.....	4,931	1,146,339	10.38	4,729	\$1,065,438	10.34
1914.....	11,755	2,619,183	9.95	11,709	2,607,163	9.94
1915.....	13,251	2,820,502	9.50	13,157	2,804,632	9.52
1916.....	15,887	3,925,735	11.07	15,066	3,664,374	10.96
1917.....	44,494	11,409,147	11.45	44,334	11,377,659	11.46
1918.....	113,459	31,664,159	12.46	111,741	31,099,264	12.42

REPORT OF BUREAU OF INSULAR AFFAIRS.

SUGAR SHIPMENTS.

Twelve months ending Dec. 31—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per pound.	Quantity.	Value.	Value per pound.
	<i>Long tons.</i>		<i>Cents.</i>	<i>Long tons.</i>		<i>Cents.</i>
1909.....	127,284	\$5,608,287	1.97	52,234	\$2,649,604	2.26
1910.....	119,552	7,224,385	2.70	99,109	6,214,226	2.80
1911.....	205,392	11,040,673	2.40	184,345	10,067,108	2.44
1912.....	193,962	9,800,340	2.26	171,763	7,005,114	2.37
1913.....	154,848	7,032,889	2.03	30,232	1,564,086	2.31
1914.....	232,761	11,059,593	2.12	166,851	8,241,853	2.21
1915.....	207,679	11,310,215	2.43	81,532	5,141,580	2.82
1916.....	332,158	18,587,593	2.50	129,801	8,633,701	2.97
1917.....	202,655	12,277,679	2.70	61,392	5,405,759	3.93
1918.....	268,941	15,804,390	2.62	104,404	8,279,890	3.54

CIGAR SHIPMENTS.

Twelve months ending Dec. 31—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per M.	Quantity.	Value.	Value per M.
	<i>Thousands.</i>			<i>Thousands.</i>		
1909.....	151,457	\$1,754,529	\$11.58	37,076	\$737,396	\$19.89
1910.....	184,407	2,759,661	14.97	61,526	1,560,799	25.37
1911.....	134,830	1,901,863	14.11	38,112	902,378	23.68
1912.....	190,842	3,092,064	16.20	90,000	1,958,321	21.76
1913.....	191,762	3,012,224	15.71	71,513	1,642,888	22.97
1914.....	154,753	2,315,159	14.96	56,205	1,200,126	21.35
1915.....	134,648	2,037,303	15.28	61,170	1,151,222	18.82
1916.....	193,026	2,844,376	14.74	111,478	2,033,121	18.24
1917.....	284,525	4,794,096	16.85	202,199	3,862,983	19.10
1918.....	359,665	7,116,719	19.79	248,748	5,682,838	22.85

LEAF TOBACCO SHIPMENTS.

Twelve months ending Dec. 31—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per pound.	Quantity.	Value.	Value per pound.
	<i>Pounds.</i>		<i>Cents.</i>	<i>Pounds.</i>		<i>Cents.</i>
1909.....	20,909,597	\$1,532,086	7.33	12,172	\$1,669	13.71
1910.....	21,408,412	1,555,870	7.27	7,436	1,507	20.27
1911.....	26,935,055	1,810,639	6.72	5,611	744	13.26
1912.....	30,837,978	2,173,998	7.05	88,636	12,517	14.12
1913.....	28,038,987	1,854,776	6.60	9,888	2,259	22.85
1914.....	28,848,165	1,757,824	6.09	45,598	4,612	10.11
1915.....	24,139,034	1,527,106	6.33	87,384	10,096	11.55
1916.....	39,168,094	2,827,657	7.22	1,028,267	118,653	11.54
1917.....	11,335,476	1,485,452	13.10	2,999,469	602,026	20.07
1918.....	51,509,394	4,977,478	9.66	1,336,001	292,015	21.86

COPRA SHIPMENTS.

Twelve months ending Dec. 31—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per ton.	Quantity.	Value.	Value per ton.
	<i>Long tons.</i>			<i>Long tons.</i>		
1909.....	107,310	\$7,672,865	\$72	5,850	\$422,178	\$73
1910.....	118,580	10,639,049	90	7,025	638,783	91
1911.....	139,901	13,019,562	93	14,969	1,378,345	92
1912.....	140,536	14,183,466	101	20,858	2,021,553	97
1913.....	80,920	9,545,724	118	9,879	1,199,083	121
1914.....	85,965	7,980,270	93	17,894	1,606,133	90
1915.....	133,895	11,111,555	81	20,882	1,760,046	84
1916.....	71,135	7,115,971	100	34,910	3,539,564	101
1917.....	90,724	8,327,151	92	67,175	6,117,951	91
1918.....	54,192	5,188,515	96	54,192	5,188,507	96

ALL OTHER SHIPMENTS.

Twelve months ending Dec. 31—	Total value.	Value of shipments to United States.
1909.....	\$1,460,570	\$481,625
1910.....	1,974,171	429,100
1911.....	2,294,427	675,670
1912.....	3,459,159	1,037,596
1913.....	4,059,910	1,143,098
1914.....	3,762,790	1,148,447
1915.....	3,647,223	1,434,352
1916.....	7,943,882	3,989,211
1917.....	10,503,002	6,222,433
1918.....	12,251,671	5,870,203

BONDED INDEBTEDNESS.

The bonded indebtedness of the Philippine Government, including the bonded indebtedness of the cities of Manila and Cebu, on June 30, 1919, was as follows:

Title of loan.	Amount.	Re-deemable.	Due.
Land purchase bonds, 4 per cent.....	\$7,000,000	1914	1934
Public works and improvement bonds, 4 per cent.....	2,500,000	1915	1935
Do.....	1,000,000	1916	1936
Do.....	1,500,000	1919	1939
General bonds of 1916, 4 per cent.....	4,000,000	1926	1946
City of Manila sewer and waterworks bonds, 4 per cent.....	1,000,000	1915	1935
Do.....	2,000,000	1917	1937
Do.....	1,000,000	1918	1938
City of Cebu sewer and waterworks bonds, 4 per cent.....	125,000	1921	1941
Total.....	20,125,000		

Ample sinking funds have been provided by law for the retirement of the above-mentioned bonds at or before maturity.

CERTIFICATES OF INDEBTEDNESS.

In March, 1919, due to the exchange situation and in order to maintain the parity between the Philippine silver peso and the gold peso, it was deemed advisable to issue temporary certificates of indebtedness as provided for in act of Congress approved March 2, 1903, entitled "An act to establish a standard of value and to provide for a coinage system in the Philippine Islands," and in act of the Philippine Legislature approved May 6, 1918, entitled "An act to regulate the currency system of the Philippine Islands and to establish a reserve fund for the same."

Accordingly, pursuant to executive order of the Governor General of the Philippine Islands under date of April 3, 1919, this bureau arranged the issuance and sale in the United States of \$10,000,000 Philippine government 4 per cent certificates of indebtedness, dated April 1, 1919, due March 31, 1920. Bids for the certificates were opened on April 10, 1919, and the entire issue was sold at a price of 99.327.

RAILWAY BONDS.

The bonds of railroads guaranteed as to interest by the Philippine government outstanding are:

Manila Railroad Co.....	\$13,714,000
Philippine Railway Co.....	8,549,000

CURRENCY RESERVE FUND.

The gold standard fund and the silver certificate reserve fund, which were established, the former for the maintenance of the parity of the Philippine silver peso with the theoretical gold peso, and the latter for the redemption of the silver certificates issued, have been merged to constitute the currency reserve fund, in pursuance of the provisions of Act No. 2776 made effective by the proclamation of the Governor General, dated August 16, 1918. Therefore, this fund is charged with the functions of maintaining the parity of the Philippine currency and of redeeming the treasury certificates.

The net profits of the fund, derived from interest on investments and bank deposits, premium on exchange, and other miscellaneous items, amounted to \$1,030,545.95 for the year ended December 31, 1918, and on that date the balance in the fund was \$56,274,604.36. Of this balance \$50,545,848.64 consisted of cash in the treasury and other depositories, \$5,130,763 consisted of investments, the remainder being accounts receivable.

PAPER CURRENCY.

During the year ending December 31, 1918, Philippine silver certificates were prepared at the Bureau of Engraving and Printing of the United States Treasury Department and shipped to the islands for circulation, as follows:

Silver certificates:

2-peso notes.....	₱3,360,000
5-peso notes.....	9,250,000
10-peso notes.....	13,900,000
20-peso notes.....	14,400,000
	<hr/>
	40,910,000

Philippine national-bank notes: 1-peso notes.....	4,000,000
---	-----------

SILVER COINAGE.

During the year there was received from the mint new coin to the amount of ₱3,868,542.50, and on December 31, 1918, the total amount in circulation and available therefor was ₱38,732,430.92, consisting of the following:

Pesos.....	₱24,566,101.00
50 centavos.....	4,306,544.50
20 centavos.....	4,393,422.20
10 centavos.....	3,025,424.80

5 centavos.....	P749, 243. 45
1 centavo.....	861, 921. 37
$\frac{1}{2}$ centavo.....	51, 659. 64
Due from United States mint.....	778, 113. 96
	38, 732, 430. 92

INSULAR RECEIPTS AND DISBURSEMENTS.

The following is a statement of insular receipts and disbursements of the Philippine Islands, exclusive of all items of a refundable character, expressed in United States currency, for the fiscal years December 31, 1915, 1916, 1917, and 1918:

	Fiscal year ending Dec. 31—			
	1915	1916	1917	1918
CREDITS.				
Balance from prior year.....	\$4, 259, 027. 92	\$5, 117, 058. 38	\$7, 516, 079. 66	\$12, 202, 341. 51
Revenues:				
Customs.....	6, 072, 544. 58	5, 801, 268. 35	7, 575, 917. 11	8, 786, 325. 90
Internal.....	6, 926, 367. 67	8, 403, 654. 43	10, 553, 135. 63	13, 962, 588. 99
Miscellaneous.....	481, 436. 40	747, 348. 24	9, 261, 567. 98	11, 596, 127. 68
Surplus gold standard fund.....	425, 594. 69	436, 209. 43	732, 763. 66	
Total revenue.....	13, 905, 943. 34	15, 388, 480. 55	28, 123, 384. 38	34, 345, 052. 57
Transfer from sinking funds.....	370, 020. 41	456, 207. 59		
Profits from sale of silver.....		915, 606. 00		
Supplies brought into account.....	64, 451. 07			
Total credits.....	18, 599, 442. 74	21, 877, 352. 52	35, 639, 464. 04	46, 547, 394. 08
DEBITS.				
Expenditures:				
Bureaus and offices.....	8, 229, 174. 51	8, 072, 081. 33	14, 810, 953. 82	12, 385, 245. 81
Miscellaneous.....	468, 736. 14	267, 019. 87	1, 106, 135. 86	395, 722. 66
Fixed charges.....	856, 188. 49	1, 072, 475. 49	1, 083, 981. 05	1, 123, 582. 87
Aid to provinces and municipalities.....	1, 487, 712. 08	1, 565, 819. 47	4, 439, 906. 07	4, 997, 023. 74
Public works.....	2, 440, 573. 14	1, 784, 128. 07	882, 143. 91	1, 352, 040. 52
Purchase of investments and securities.....		1, 648, 748. 63	1, 114, 001. 82	1, 968, 931. 02
Revenue service.....				6, 525, 475. 19
Surplus:				
Cash.....	1, 249, 688. 02	6, 532, 130. 98	10, 813, 831. 48	15, 072, 004. 58
Other.....	3, 867, 370. 36	983, 948. 68	1, 388, 510. 03	2, 727, 367. 69
Total debits.....	18, 599, 442. 74	21, 877, 352. 52	35, 639, 464. 04	46, 547, 394. 08

PORTO RICO.

TOTAL FOREIGN TRADE.

Twelve months ending June 30—	Consignments.			Shipments.		
	From United States.	From foreign countries.	Total.	To United States.	To foreign countries.	Total.
1910.....	\$27, 097, 664	\$3, 537, 201	\$30, 634, 865	\$32, 096, 645	\$5, 864, 574	\$37, 960, 219
1911.....	34, 671, 968	4, 115, 039	38, 786, 997	34, 785, 409	5, 152, 958	39, 938, 367
1912.....	33, 470, 963	4, 501, 828	42, 972, 891	42, 873, 401	6, 832, 012	49, 705, 413
1913.....	28, 155, 006	3, 745, 057	36, 900, 063	40, 538, 623	8, 564, 942	49, 103, 565
1914.....	32, 568, 368	3, 838, 419	36, 406, 787	34, 423, 180	8, 679, 582	43, 102, 762
1915.....	30, 929, 831	2, 954, 465	33, 884, 296	42, 311, 920	7, 014, 987	49, 356, 907
1916.....	35, 892, 515	3, 058, 841	38, 951, 356	60, 952, 758	5, 778, 815	66, 731, 573
1917.....	49, 539, 249	4, 008, 975	53, 548, 224	73, 115, 224	7, 855, 993	80, 970, 917
1918.....	58, 945, 758	4, 443, 524	63, 389, 282	65, 515, 650	8, 779, 033	74, 294, 683
1919.....	57, 808, 086	4, 502, 275	62, 400, 360	71, 015, 351	8, 480, 689	79, 496, 040

SUGAR SHIPMENTS.

Twelve months ending June 30—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per pound.	Quantity.	Value.	Value per pound.
	<i>Pounds.</i>		<i>Cents.</i>	<i>Pounds.</i>		<i>Cents.</i>
1910.....	569,015,148	\$23,545,922	4.14	569,039,881	\$23,545,665	4.14
1911.....	645,838,403	24,479,346	3.79	645,834,403	24,479,159	3.79
1912.....	734,289,872	31,544,063	4.30	734,289,872	31,544,063	4.30
1913.....	765,400,310	26,619,158	3.48	765,400,310	26,619,158	3.48
1914.....	611,266,527	20,210,335	3.16	611,252,527	20,239,831	3.16
1915.....	588,960,498	27,278,754	4.63	588,922,498	27,277,839	4.63
1916.....	819,910,000	45,809,445	5.39	819,763,491	45,799,299	5.39
1917.....	977,896,000	54,015,903	5.52	977,377,996	53,987,767	5.53
1918.....	673,575,420	41,362,229	6.14	672,937,334	41,310,815	6.14
1919.....	703,820,623	48,132,419	6.84	703,286,023	48,091,799	6.84

COFFEE SHIPMENTS.

1910.....	45,209,792	\$5,669,602	12.54	163,350	\$21,876	13.39
1911.....	33,937,021	4,992,779	14.71	218,911	35,726	14.35
1912.....	40,116,365	6,751,913	16.83	414,656	71,104	17.15
1913.....	49,774,197	8,511,316	17.10	773,626	132,970	17.19
1914.....	50,211,917	8,193,544	16.32	420,614	73,279	17.42
1915.....	51,125,620	7,082,791	13.86	4,159,893	542,619	13.04
1916.....	32,144,283	5,049,283	15.71	509,158	77,965	15.31
1917.....	39,615,146	5,832,081	14.87	212,021	32,456	15.31
1918.....	37,627,773	5,501,145	14.63	256,697	39,061	15.23
1919.....	27,897,971	6,065,573	21.70	276,529	68,912	24.93

LEAF TOBACCO SHIPMENTS.

1910.....	2,975,133	\$1,141,304	38.36	2,924,175	\$1,137,529	38.99
1911.....	3,509,501	1,444,901	41.17	3,495,544	1,443,215	41.29
1912.....	4,680,781	2,228,125	47.60	4,680,781	2,228,125	47.60
1913.....	7,075,681	3,021,059	42.70	6,962,467	3,006,854	43.25
1914.....	9,244,490	3,206,610	34.69	6,308,227	2,961,614	46.96
1915.....	7,268,823	2,971,748	42.26	7,035,777	2,854,804	43.42
1916.....	6,767,478	2,864,552	42.33	6,705,823	2,857,036	42.62
1917.....	8,111,765	3,601,539	44.44	7,958,439	3,583,052	45.08
1918.....	13,206,492	7,927,760	60.03	13,121,315	7,913,675	60.30
1919.....	14,596,976	7,563,845	51.82	12,460,316	7,259,709	58.29

CIGAR SHIPMENTS.

Twelve months ending June 30—	Total.			Shipments to United States.		
	Quantity.	Value.	Value per M.	Quantity.	Value.	Value per M.
	<i>Thousands.</i>			<i>Thousands.</i>		
1910.....	149,746	\$4,480,030	\$29.92	149,469	\$4,473,123	\$29.93
1911.....	174,484	5,355,223	30.69	174,246	5,349,626	30.70
1912.....	169,765	5,096,711	29.96	169,481	5,077,976	29.96
1913.....	165,768	5,800,696	35.01	165,521	5,800,162	35.04
1914.....	162,022	5,597,276	34.68	161,093	5,592,803	34.70
1915.....	170,264	6,016,122	35.33	169,562	6,006,480	35.42
1916.....	157,174	5,531,535	35.19	156,996	5,528,496	35.21
1917.....	205,908	7,813,010	38.20	201,863	7,834,963	38.24
1918.....	179,188	7,134,693	39.82	179,038	7,131,535	39.83
1919.....	149,798	6,657,522	44.44	149,335	6,647,621	44.51

FRUIT AND NUT SHIPMENTS.

Twelve months ending June 30—	Total value.	Value of shipments to United States.
1910.....	\$1,635,817	\$1,632,411
1911.....	2,073,993	2,068,194
1912.....	2,377,762	2,369,727
1913.....	3,120,919	3,115,257
1914.....	3,400,903	3,390,554
1915.....	3,441,157	3,434,707
1916.....	3,355,285	3,321,423
1917.....	3,459,569	3,444,541
1918.....	3,635,666	3,611,589
1919.....	2,898,580	2,891,657

ALL OTHER SHIPMENTS.

1910.....	\$1,487,544	\$1,285,041
1911.....	1,572,125	1,399,499
1912.....	1,713,839	1,582,406
1913.....	2,030,427	1,894,222
1914.....	2,461,091	2,165,099
1915.....	2,566,335	2,095,241
1916.....	4,121,473	3,365,539
1917.....	6,155,815	4,232,426
1918.....	8,730,190	5,508,942
1919.....	8,178,101	6,055,623

RECEIPTS AND EXPENDITURES.

A comparative statement of all receipts and disbursements of Porto Rico for the fiscal years 1917, 1918, and 1919 follows:

	Fiscal year ending June 30—		
	1917	1918	1919
Balance.....	\$159,767.10	\$581,476.17	\$708,540.31
Revenues:			
Customs.....	378,000.00	370,000.00	355,000.00
Internal.....	4,093,297.18	3,532,312.25	4,156,792.49
United States internal revenues.....		1,039,685.40	929,571.03
Miscellaneous.....	456,387.70	484,081.63	770,010.78
Other receipts:			
Repayment of loans.....	608,189.59	14,210.63	63,179.93
Repayment of transfers.....	296,133.22	198,917.06	420,516.64
Repayments, bureau of supplies.....	604,327.72	899,461.69	1,202,397.90
Proceeds from bond sales and loans.....	301,733.33		
Total.....	6,927,835.84	7,119,144.83	8,606,008.98
Expenditures:			
Legislative.....	63,474.62	114,635.27	89,163.60
Executive.....	1,334,041.59	1,282,966.84	1,601,812.91
Insular police.....	431,146.37	476,621.72	524,651.04
Maintenance and repairs—			
Roads and bridges.....	676,465.74	736,911.45	762,943.65
Public buildings.....	65,985.36	93,416.44	151,463.62
Insular telegraph.....	82,948.19	99,763.09	111,447.30
Harbor improvements.....	4,649.32	3,004.75	939.15
Public schools.....	1,341,538.96	1,422,886.48	1,581,070.57
University of Porto Rico.....	50,545.98	50,205.63	51,365.95
Sanitation.....	232,549.87	482,475.64	860,319.55
Insular library.....	9,209.58	11,325.26	15,295.90
Bureau of supplies.....	706,190.79	972,480.31	1,324,402.53
Judicial.....	426,076.15	421,188.43	415,357.77
Other payments:			
Loans to municipalities and school boards.....	474,748.96	84,826.79	34,996.61
Repayments and transfers.....	324,779.19	72,896.27	127,872.90
Municipal and school board bonds.....	119,000.00	85,000.00	114,500.00
Cash balance.....	581,476.17	708,540.31	838,385.93
Total.....	6,927,835.84	7,119,144.83	8,606,008.98

BONDED INDEBTEDNESS.

The bonded indebtedness of the insular government of Porto Rico on June 30, 1919, was as follows:

Title of loan.	Amount out-standing.	Interest.	Maturing.
Road bonds:		<i>Per cent.</i>	
1907.....	\$400,000	4	\$50,000 on Jan. 1 of each year.
1910.....	425,000	4	Redeemable after Jan. 1, 1920; payable Jan. 1, 1927.
Irrigation bonds:			
1909.....	2,100,000	4	\$150,000 on Jan. 1 of each year.
1913.....	1,000,000	4	Redeemable after Jan. 1, 1933; payable Jan. 1, 1943.
1913, construction and refunding.....	700,000	4	\$100,000 annually, beginning Jan. 1, 1944.
1914, construction and refunding.....	400,000	4	\$100,000 annually, beginning Jan. 1, 1951.
1915, refunding.....	400,000	4	\$100,000 annually, beginning Jan. 1, 1953.
1916, refunding.....	200,000	4	\$100,000 annually, beginning Jan. 1, 1959.
1918.....	117,000	4	Serially, 1958 to 1959.
San Juan Harbor improvement bonds:			
1912.....	100,000	4	Redeemable after Jan. 1, 1922; payable Jan. 1, 1937.
1914.....	200,000	4	Redeemable after Jan. 1, 1924; payable Jan. 1, 1939.
1915.....	200,000	4	Redeemable after Jan. 1, 1925; payable Jan. 1, 1940.
1917.....	100,000	4	Redeemable after Jan. 1, 1927; payable Jan. 1, 1942.
Public improvement bonds:			
1914.....	1,000,000	4	Redeemable after Jan. 1, 1925; payable Jan. 1, 1939.
1916.....	500,000	4	Serially, 1927 to 1930.
1918.....	500,000	4	Do.
Insular loans, refunding bonds:			
1914.....	655,000	4	Serially, 1923 to 1953.
1915.....	300,000	4	Serially, 1919 to 1935.
1916.....	270,000	4	Serially, 1919 to 1927.
Total outstanding.....	9,567,000		

DOMINICAN CUSTOMS RECEIVERSHIP.

The following table shows the financial transactions of the receivership during the year:

Statement of the customs service, Dominican Republic, for the year ending Dec. 31, 1918.

Balance.....	\$655,137.25
Customs collections.....	4,292,739.27
Miscellaneous.....	21,431.84
Total.....	4,969,308.36
Customs expense.....	199,896.32
Payments:	
Dominican Government.....	2,443,973.84
Fiscal agent.....	1,845,042.73
Other disbursements:	
Refunds.....	32,646.57
Frontier customs service.....	7,094.01
Revenue-cutter service.....	1,731.21
Building fund.....	81,032.65
Exchange.....	4,612.50
All other.....	17,333.71

Balances:

Cash in transit (deputy receivers).....	\$(2, 637. 87)
Fiscal agent.....	237, 904. 73
Building fund.....	100, 394. 83
Dominican Government.....	283. 13
Total.....	4, 969, 308. 36

Statement of sinking fund—Dominican Republic \$20,000,000 customs administration loan as of Dec. 31, 1918.

RECEIPTS.**From general receiver of customs, account calendar year—**

1908.....	\$331, 757. 53
1909.....	200, 000. 00
1910.....	260, 820. 90
1911.....	394, 092. 24
1912.....	482, 772. 25
1913.....	782, 908. 34
1914.....	207, 666. 01
1915.....	593, 588. 13
1916.....	664, 644. 47
1917.....	1, 295, 042. 73
1918.....	788, 668. 51

From interest allowed by fiscal agent..... 151, 095. 15

From interest received on bonds purchased..... 960, 909. 59

Total..... 7, 113, 965. 85

DISBURSEMENTS.**For \$6,642,450 customs administration bonds purchased,**

par value.....	\$6, 642, 450. 00
Less discount.....	334, 498. 62
	6, 307, 951. 38

Cash balance:

In sinking fund.....	310, 441. 52
With fiscal agent, general account.....	206, 904. 44
With general receiver of customs.....	288, 668. 51
	806, 014. 47

Total..... 7, 113, 965. 85

ASSETS IN SINKING FUND.

\$6,642,450 customs administration bonds, at par value.....	6, 642, 450. 00
Interest on above bonds accrued but not collected.....	138, 384. 38
Cash balance.....	806, 014. 47
Total.....	7, 586, 848. 85

INDEX.

	Page.		Page.
Bonded indebtedness:		Philippine Islands—Continued.	
Philippine Islands.....	9	Copra, shipments of.....	8
Porto Rico.....	14	Gold standard fund.....	10
Cigars:		Hemp, shipments.....	7
Shipments from the Philippine		Shipments.....	7
Islands.....	8	Insular receipts and expendi-	
Shipments from Porto Rico...	12	tures.....	11
Coffee, shipments from Porto Rico.	12	Paper currency.....	10
Coconut oil, shipments from the		Railroad bonds.....	10
Philippine Islands.....	7	Shipments to Philippine Is-	
Coinage, silver.....	10	lands.....	7
Commerce:		Silver coinage.....	10
Value of Philippine.....	7	Sugar, shipments.....	8
Value of Porto Rico.....	11	Tobacco, shipments.....	8
Copra, shipments from the Philip-		Porto Rico:	
pine Islands.....	8	Bonded indebtedness.....	14
Currency, paper.....	10	Cigars, shipments.....	12
Disbursements:		Coffee, shipments.....	12
Philippine Islands.....	11	Commerce, value of.....	11
Porto Rico.....	13	Earthquakes.....	5
Santo Domingo.....	15	Fruit, shipments.....	13
Dominican customs receivership:		Influenza.....	6
Collections.....	14	Nuts, shipments.....	13
Disbursements.....	15	Receipts and expenditures...	13
Sinking-fund statement.....	15	Sugar, shipments.....	12
Disbursements.....	15	Tobacco, shipments.....	12
Receipts.....	15	Railroads, bonds.....	10
Earthquake, damage done.....	5	Receipts and expenditures:	
Fruits, shipments from Porto Rico.	13	Dominican Republic.....	15
Gold standard fund, statement of..	10	Philippine Islands.....	11
Hemp, shipments from the Philip-		Porto Rico.....	13
pine Islands.....	7	Rice, embargo on.....	5
Influenza, epidemic of.....	6	Santo Domingo. <i>See</i> Dominican	
Insular Affairs, Bureau of, per-		Republic.	
sonnel.....	6	Silver coinage, shipments to the	
Manila Railroad Co., bonds.....	10	Philippine Islands.....	10
Nuts, shipments from Porto Rico..	13	Smallpox, epidemic of.....	5
Personnel, Bureau of Insular Af-		Sugar:	
fairs.....	6	Shipments from Philippine	
Philippine Islands:		Islands.....	8
Bonded indebtedness.....	9	Shipments from Porto Rico...	12
Certificates of indebtedness...	9	Tobacco:	
Cigars, shipments from.....	8	Shipments from Philippine	
Coconut oil, shipments.....	7	Islands.....	8
Commerce, value of.....	7	Shipments from Porto Rico...	12

REPORT OF THE GOVERNOR OF PORTO RICO

CONTENTS.

	Page.
Report of the Governor of Porto Rico.....	3
Introduction.....	3
External commerce.....	8
Legislation.....	24
Executive.....	25
Proclamations.....	25
Pardons and paroles.....	25
Health and sanitation.....	25
Public asylums.....	26
Charity schools.....	27
Insular board of health.....	27
Institute of tropical medicine and hygiene.....	28
Insular police.....	29
Civil service commission.....	29
Board of medical examiners.....	30
Board of pharmacy.....	30
Board of dental examiners.....	31
Board of veterinary examiners.....	31
Board of trustees of the University of Porto Rico.....	31
Board of trustees of the Carnegie Library.....	31
Insular Government finance.....	32
Outstanding bonded indebtedness.....	34
Municipalities.....	34
Education.....	36
Agriculture and labor.....	37
Auditing and accounting.....	39
Public works—roads and buildings.....	39
Roads and bridges.....	39
Buildings.....	39
Public lands.....	40
Insular telegraph.....	40
Harbors and docks.....	40
Irrigation district.....	41
Justice.....	42
Penal institutions and reform school.....	42
Franchises.....	43
Personnel.....	43
Workmen's relief commission.....	43
Public service commission.....	45
Food commission.....	47
Twenty years' progress.....	47
Twenty years of progress in Porto Rico—1899-1919.....	47
Two decades of educational progress in Porto Rico.....	49
Conclusion.....	54
Appendices.....	55
Appendix I.—Exhibits to the report of the governor.....	57
Appendix II.—Report of the executive secretary of Porto Rico.....	83
Appendix III.—Report of the commissioner of health.....	127
Appendix IV.—Report of the auditor.....	233
Consolidated financial exhibits.....	251
Appendix V.—Report of the treasurer.....	345
Appendix VI.—Report of the commissioner of the interior.....	397
Appendix VII.—Report of the commissioner of education.....	531
Appendix VIII.—Report of the attorney general.....	617
Appendix IX.—Report of the commissioner of agriculture and labor..	685
Appendix X.—Report of the food commission.....	715

NINETEENTH ANNUAL REPORT

OF

THE GOVERNOR OF PORTO RICO.

GOVERNMENT HOUSE,
San Juan, Porto Rico, September 30, 1919.

SIR: Pursuant to law, I have the honor to submit the following report of the Governor of Porto Rico covering the fiscal year ended June 30, 1919.

INTRODUCTION.

The fiscal year covered by this report was a period checkered in an unusual degree by extreme vicissitudes of fortune, by great prosperity, and tragic disaster. It was undoubtedly the most exciting and eventful year in all the history of Porto Rico. It was the year in which came the sudden transition from a state of world wide war to the blessings and problems of peace. It was the year in which there came to Porto Rico the greatest, most alarming, and most destructive earthquake that had ever visited the island. This major disaster was quickly followed by a widespread and alarming epidemic of influenza, which numbered its victims by the scores of thousands and its fatalities by the thousand. At the same time the return to Porto Rico of large bodies of laborers who had been taken to the continent by the War Department for urgent war work just before the armistice, and the rapid demobilization of the large body of soldiers forming the Porto Rico contingent of the National Army brought many difficult problems of unemployment and reemployment of discharged soldiers.

Without outside aid except that of the Porto Rican Chapter of the American Red Cross and the military authorities of Camp Las Casas, the insular government managed to relieve the greatest part of the suffering and the losses caused by the earthquake and the epidemic, though it required the expenditure by the local government of more than \$1,000,000 of funds greatly needed for other things. Congress did not see fit to make any appropriation to aid in this relief work or reconstruction. It is hoped, however, that the Federal Government may yet at some time provide means to rebuild or repair its own buildings that were destroyed or damaged by the earthquake, both those that were used exclusively for its own services and those that were used wholly or in part by the insular government. The first great shock of earthquake occurred at 15 minutes past 10 a. m., on October 11, and was especially severe on the west coast, although it was strongly felt all over the island. The greatest damage was done in the municipalities of Mayaguez,

Aguadilla, Anasco, and Aguada, though the destruction and loss was by no means confined to these cities. The shock was followed by a tidal wave of considerable height which struck against the western coast of the island and added greatly to the destruction and loss of life. There were many after shocks following the first for a period of more than a month, two of them, namely, those of October 24 and November 12, being almost as severe as the first. After the last mentioned date the shocks gradually subsided and seemed to have ceased. A seismological commission kindly appointed by the Secretary of War and consisting of Dr. H. F. Reid, of Johns Hopkins University, and Prof. Stephen Taber, of the University of South Carolina, visited the island in November and made a careful study of the phenomena of the earthquake from a scientific point of view. Their report was published in both English and Spanish and widely circulated throughout the island. The casualties and property losses caused by the earthquake were as follows:

Persons killed outright.....	116
Persons injured.....	241

Property losses were estimated at \$3,472,159, of which \$1,317,463 were public buildings and \$2,154,696 churches and private property.

The total deaths reported due to the epidemic were 10,888.

In spite, however, of these disasters and difficulties the island was in general prosperous at the close of the fiscal year. The exports were large, in fact larger than those of any previous year except those of 1916-17, which were only slightly in excess. The general conditions of business were sound and hopeful. The usual problems of readjustment and reconstruction following in the wake of the great world war are working themselves out here as elsewhere.

The island has also had its troubles and difficulties in enforcing the prohibition law, but probably not more than elsewhere.

As a result of the disasters of earthquake and epidemic above referred to a special session of the legislature was called to meet on December 4, 1918. This body met pursuant to the call and devoted themselves assiduously for 10 days to the difficult tasks of providing funds and formulating measures to combat the plague, relieve the victims of both calamities, aid the municipalities most seriously affected, and in general reconstruct and repair the damages caused by both of these great disasters.

On February 10 the regular session of the legislature began according to law and continued with two or three short recesses until July 6, when it adjourned sine die. The legislative work of both of these sessions is discussed elsewhere in this volume. During the month of April, 1919, a large delegation of Congressmen visited Porto Rico with their wives upon invitation of the local legislature.

These visitors were most cordially welcomed and entertained in the island for one week by committees of the legislature. They expressed themselves as being highly pleased and benefited by their brief trip to Porto Rico, and the knowledge gained of the island and its people.

All of the various forms of war work necessary to prosecute the war to a successful issue were diligently carried on in Porto Rico both before and after the armistice was signed in November, 1918.

Two Liberty loan campaigns were carried through very successfully, namely, the fourth Liberty loan in the autumn of 1918, and the Victory loan in the spring of 1919. The result of the first was a total subscription of \$4,723,150, which was an oversubscription of \$723,150 above the quota of \$4,000,000. The Victory loan campaign resulted in total subscriptions of \$2,290,000 of Victory bonds, which, although much below the quota of \$3,000,000 assigned to the island, was very creditable when all the conditions are fairly considered. When these amounts are added to the total subscriptions to the previous issues they make a grand total of subscriptions of \$12,383,150 of Liberty bonds placed in Porto Rico during the war. During the fiscal year there was also carried out a campaign for contributions to the united war fund for the use of the seven great organizations for training-camp activities, which resulted in total contributions of about \$150,000. In these financial ways, as in all other ways, Porto Rico loyally and cheerfully supported the great war for liberty to the best of her ability.

Commercial business has been active and growing, and there has been increases generally in the wages of the workers, though perhaps not sufficient to offset the increase in the cost of the necessities of life. A long and costly strike of the cigar makers caused the closing of the factories for a period of six months, but it was finally satisfactorily settled by negotiations in which the workers secured important increases in wages and other advantages.

The external trade reached a total of \$141,896,400, which is \$4,223,096 in excess of the record-breaking figures of the previous year. This large external trade caused the general prosperity to continue upon much the same level as for the past two or three years, notwithstanding the untoward events already mentioned.

An examination of the figures in detail reveals some variations worthy of notice, due to the continuance of war conditions. The total exports increased in value about five and one-half million dollars over those of the previous year, going up to \$79,496,040 from \$74,294,022. This figure was exceeded only once in the history of the island, namely, in 1917. Had it not been for the embargo placed upon the shipment of sugar for nearly one month in April there would have been shipped to the United States about 35,000 tons more of sugar, which would have added nearly five millions of dollars to the total exports and have made the year the banner year for exports.

The total imports were \$62,400,360. The trade balance in favor of Porto Rico was \$17,095,680. It is worthy of notice that the trade balances for the last five years in favor of the island aggregate nearly one hundred millions of dollars.

The exportation of articles other than sugar was \$31,404,241, which was about a million and one-half dollars less than the previous year. This decline is more than accounted for by the decrease in the exportations of citrus fruits and pineapples, which amounted to \$1,000,000, and of cigars and tobacco, which together amounted to \$1,033,112. The cause of the falling off in fruits was the continuation of the snipping difficulties, which I hope have culminated at last and will be remedied entirely next year. The crop for next year promises to be large and the price good, and I hope that the transportation companies will meet the occasion with more boats, better ventilation, and better service. The exports of coffee amount to \$6,065,573, about

half a million dollars more than the previous year or any other year since 1915.

This increase in value was due wholly to an increase in the average price, which was 8 cents per pound higher than the average of all the previous years since 1900. The quantity exported was less than twenty-eight million pounds, the smallest crop since 1905. As usual, only a very small part of the coffee was shipped to the United States. There were notable increases in the exportations of cocoanuts and honey, the former going up in value from \$561,062 in 1918, to \$756,233 in 1919, the latter from \$388,653 to \$666,457, an increase nearly 40 per cent in the one case and more than 70 in the other.

Sugar, of course, at this time still retains its supremacy among the exports of Porto Rico, but nevertheless even in this period of the high tide of production and abnormal price of sugar it seems to be losing somewhat of its relative importance. In 1916 sugar exportations were 69 per cent of the total value of exports. In 1919 they were a little more than 60 per cent.

Turning to imports, it is found that the total imports, valued at \$62,400,360, were just about one million dollars less than the unprecedented figures of the previous year. However, the imports from foreign countries were increased by about \$60,000. There were a few articles of foreign imports in which there were large increases aggregating several hundred thousand dollars, namely, vegetable oils, presumably olive oil from Spain, \$165,000 increase; rice, presumably from the Orient, \$358,000; and unmanufactured tobacco, \$160,000, presumably from the Dominican Republic. Most other items of imports from foreign countries decreased. As to imports from the United States, there was a large increase in breadstuffs, going up to \$16,890,964 from \$13,354,490 the previous year, probably due chiefly to increase in prices. Almost every other important item seems to have decreased, some of them quite largely. On the whole, the external trade of Porto Rico is not only growing in volume, but also becoming better balanced and more normal and wholesome. Both exports and imports are becoming more diversified.

The internal business has followed in the wake of the large external trade and seems to be in a state of general prosperity. During the year 63 new corporations, with a total authorized capital stock of \$18,639,000, were organized and authorized to transact business. This was 31 more than the previous year and more than any year upon record. In addition to these domestic corporations 6 foreign corporations, with a total authorized capital stock of \$7,925,000, were registered for the purpose of doing business in Porto Rico.

A further evidence of the expansion of internal business is found in the fact that 95 domestic trade-marks were registered, an increase of 53 per cent as compared with the previous year, and 70 letters patent were registered, making an increase of 44 per cent over the previous year.

The banking situation, as shown by the consolidated statement of the banks published elsewhere in this report, seems to be not only safe and sound but also steadily expanding to meet the needs of enlarged trade and growing business. Three new banks were organized, namely the Masonic Bank of Porto Rico, with a capital stock of \$20,540; Bank of San Juan, with a capital stock of \$50,000, and the Banco de Yabucoa, with a capital stock of \$100,000, and some of the older banks made large increases of their capital stock and surplus.

The aggregate deposits of all the recognized banking institutions increased by nearly five million dollars over the figures of the previous year, which were the largest ever recorded.

There was an increase in the aggregate loans of \$7,503,973, and at the same time the cash reserve increased \$331,088. There was also an increase in the capital stock paid in of \$381,997.

The large increase in loans over the high figures of the previous year is a gratifying indication not only of the local demand for capital but also of the ability to offer good security. It also is gratifying to note that there has been no increase at least in the rate of interest.

The department of agriculture and labor is still engaged in perfecting its organization and increasing its instrumentalities for its very important task. Both the agricultural and the educational departments continued through the year their close cooperation with the food commission in promoting the production of foodstuffs on the island, until the latter body closed its operations with the end of the war. This effort has proved notably successful and it is hoped will be permanent. Corn and vegetables can now be seen growing all over the island.

A good beginning has been made in the forestry work by combining in the closest cooperation the insular service with the Federal Government. About 10,000 acres will soon be added to the insular forest reserve, which already consists of about 14,500 acres of swamp lands called "manglares." There are also about 15,000 acres in the National Forest Reserve in charge of the Federal service.

The work in the department of education encountered throughout the year the greatest difficulties ever experienced. In addition to the continued drain of teachers into the military service and the difficulty of low salaries, the most serious interruptions were caused in the school work by the continued earthquake shocks and the epidemic of influenza. The anxiety of parents for the safety of their children caused many thousands of children to be kept out of the schools during the whole period of the earthquakes, and during the epidemic hundreds of the schools were closed not only on account of the sickness of the children and their teachers but also because many school buildings were requisitioned for hospitals and kept out of service for several weeks.

And yet notwithstanding all of these unprecedented difficulties, the total enrollment was increased over that of the previous year, and the work accomplished was quite creditable under the circumstances. The loyalty of the people to their schools was thoroughly tested and triumphantly stood the test.

The report of the department of health shows that the year was one of severe trial and taxed to the utmost both the personal and the financial resources of the department. Both of the catastrophes of the year, especially the epidemic of influenza, made tremendous calls upon this department. The extent of this emergency work may be understood when it is stated that the total number of cases of influenza reported in the whole island during the epidemic was 261,828, there being more than 100,000 sick at one time, and the total number of deaths from this disease and its complications is given at 10,888. Of course the death rate per thousand was greatly increased thereby, reaching the figure of 31.75 as compared with 27.71 the previous year. Subtracting the deaths from influenza it would have been 23.10.

A great step forward has been taken in the fight against tuberculosis by the building of a good modern sanatorium in which those suffering from this dreadful disease may be segregated and treated by the physicians of the health department.

Funds have also been provided to make a beginning in the hospitalization and treatment of sufferers from malaria and uncinarias, which next to infant mortality are the most important factors in the annual death rate.

EXTERNAL COMMERCE.

The value of imports and exports during the fiscal year 1918-19 aggregated \$141,896,400, an increase of \$4,213,096 over the figures of the preceding year. Imports were valued at \$62,400,360 representing a decrease of \$988,922 as compared with the year 1917-18, and exports valued at \$79,496,040 showed an increase of \$5,202,018.

The following tables indicate the relative values and quantities of imports and exports during the year 1918-19 and previous years:

TABLE NO. 1.—*Merchandise shipped from Porto Rico to the United States and foreign countries.*

Years.	To the United States.	To foreign countries.	Total.	Years.	To the United States.	To foreign countries.	Total.
1901.....	\$5,581,288	\$3,002,679	\$8,583,967	1911.....	\$34,765,400	\$5,152,958	\$39,918,357
1902.....	8,378,766	4,055,190	12,433,956	1912.....	42,873,401	6,832,012	49,705,413
1903.....	11,051,195	4,037,884	15,089,079	1913.....	40,538,623	8,564,942	49,103,565
1904.....	11,722,826	4,543,077	16,265,903	1914.....	34,423,180	8,679,582	43,102,762
1905.....	15,633,145	3,076,420	18,709,565	1915.....	42,311,920	7,044,967	49,356,907
1906.....	19,142,461	4,115,069	23,257,530	1916.....	60,962,768	5,778,806	66,731,573
1907.....	22,070,133	4,926,167	26,996,300	1917.....	73,115,224	7,855,693	80,970,917
1908.....	25,891,281	4,753,209	30,644,490	1918.....	65,514,980	8,779,083	74,294,022
1909.....	26,394,312	8,996,913	35,391,225	1919.....	71,015,351	8,480,689	79,496,040
1910.....	32,095,645	5,864,574	37,960,219				

TABLE NO. 2.—*Merchandise shipped into Porto Rico from the United States and foreign countries.*

Years.	From the United States.	From foreign countries.	Total.	Years.	From the United States.	From foreign countries.	Total.
1901.....	\$6,965,408	\$1,952,728	\$8,918,136	1911.....	\$34,671,958	\$4,115,039	\$38,786,997
1902.....	10,882,653	2,326,957	13,209,610	1912.....	38,470,963	4,501,928	42,972,891
1903.....	12,245,845	2,203,441	14,449,286	1913.....	33,155,005	3,745,057	36,900,062
1904.....	11,210,069	1,958,060	13,168,029	1914.....	32,568,368	3,838,419	36,406,787
1905.....	13,974,070	2,562,189	16,536,259	1915.....	30,929,831	2,954,465	33,884,296
1906.....	19,224,891	2,602,784	21,827,665	1916.....	35,892,515	3,058,641	38,951,156
1907.....	25,686,285	3,580,887	29,267,172	1917.....	49,539,249	4,005,975	53,545,224
1908.....	22,677,376	3,148,289	25,825,665	1918.....	58,945,758	4,443,524	63,389,282
1909.....	23,618,545	2,925,781	26,544,326	1919.....	57,898,085	4,502,275	62,400,360
1910.....	27,097,654	3,537,201	30,634,855				

CHART SHOWING COMPARATIVE TOTAL EXTERNAL TRADE WITH THE UNITED STATES & FOREIGN COUNTRIES FROM 1901-1919

IN MILLIONS OF DOLLARS

with the United States



with the Foreign Countries

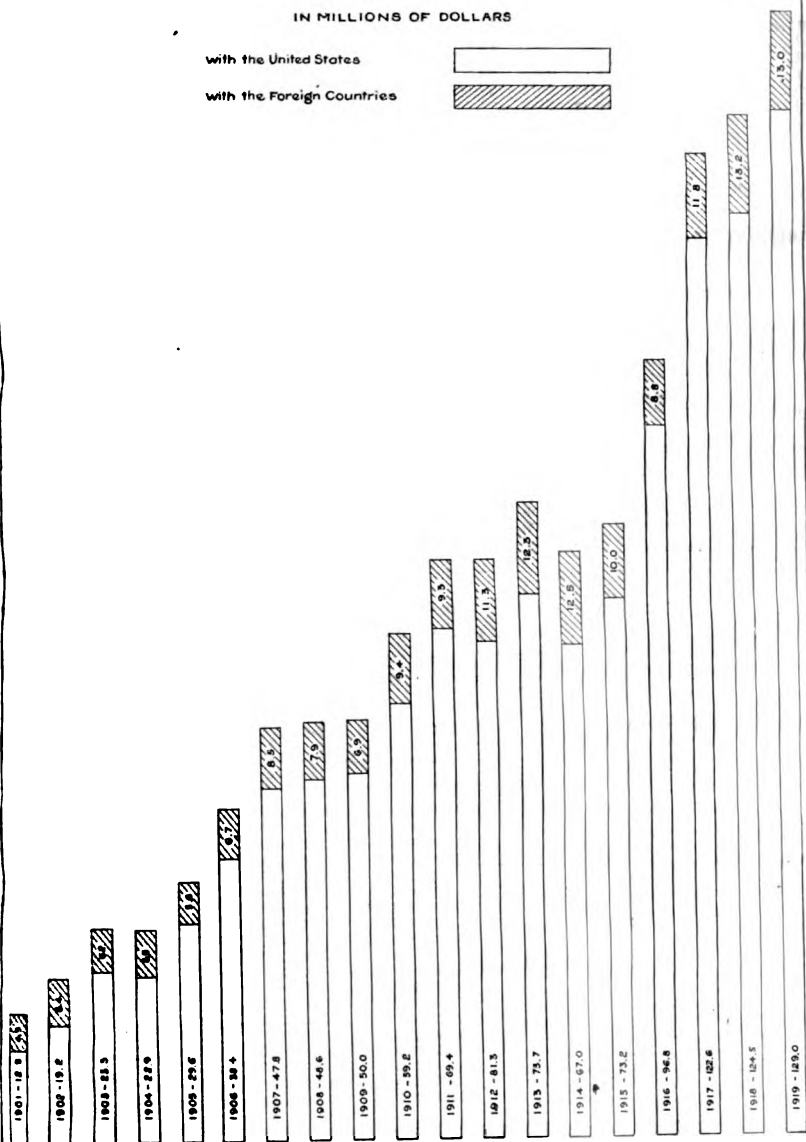


TABLE NO. 3.—*Merchandise shipped into and from Porto Rico in trade with the United States.*

Years.	Imports.	Exports.	Total trade with United States.	Years.	Imports.	Exports.	Total trade with United States.
1901.....	\$6,965,408	\$5,581,288	\$12,546,696	1911.....	\$34,671,958	\$34,765,400	\$69,437,357
1902.....	10,882,653	8,378,766	19,261,419	1912.....	38,470,983	42,873,401	81,344,384
1903.....	12,245,945	11,051,195	23,297,040	1913.....	33,155,005	40,538,623	73,693,628
1904.....	11,210,069	11,722,326	22,932,395	1914.....	32,568,368	34,423,180	66,991,548
1905.....	13,974,070	15,633,145	29,607,215	1915.....	30,929,831	42,311,920	73,241,751
1906.....	19,224,681	19,142,461	38,367,142	1916.....	35,892,515	60,952,768	96,845,283
1907.....	25,686,285	22,070,133	47,756,418	1917.....	49,539,249	73,115,224	122,654,473
1908.....	22,677,376	25,891,281	48,568,657	1918.....	58,945,758	65,514,060	124,460,747
1909.....	23,618,545	26,394,312	50,012,857	1919.....	57,898,085	71,015,351	128,913,436
1910.....	27,097,654	32,095,645	59,193,299				

TABLE NO. 4.—*Merchandise shipped into and from Porto Rico in trade with foreign countries.*

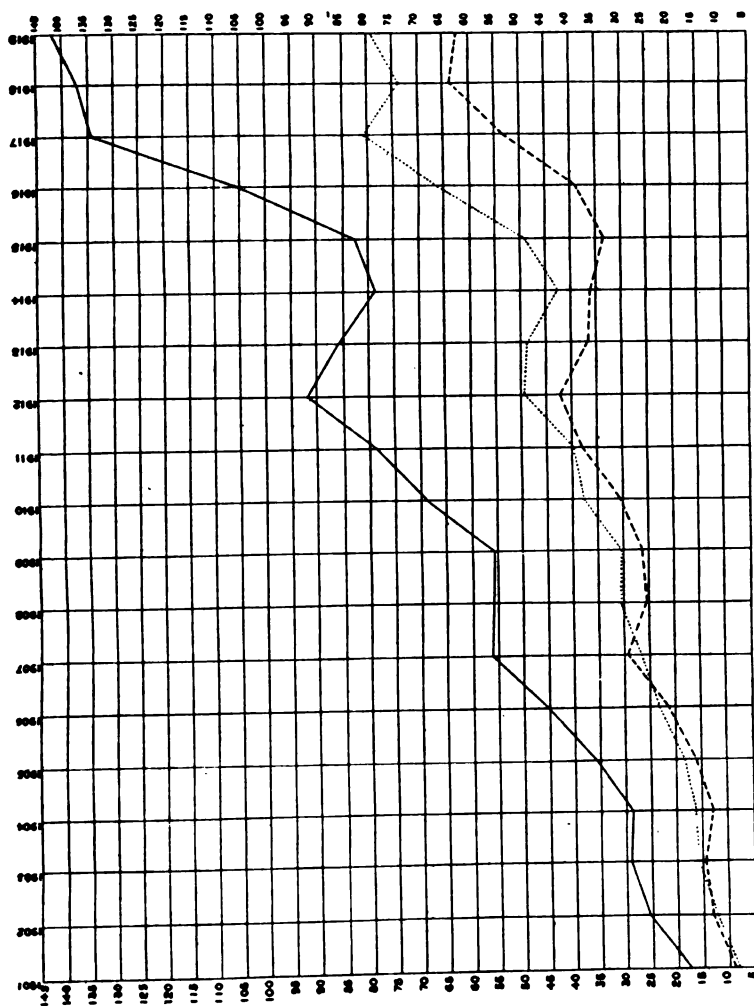
Years.	Imports.	Exports.	Total foreign trade.	Years.	Imports.	Exports.	Total foreign trade.
1901.....	\$1,952,728	\$3,002,679	\$4,955,407	1911.....	\$4,115,039	\$5,152,958	\$9,267,997
1902.....	2,326,957	4,055,190	6,382,147	1912.....	4,501,928	6,832,012	11,333,940
1903.....	2,208,441	4,037,884	6,246,325	1913.....	3,745,057	8,564,942	12,309,999
1904.....	1,958,960	4,543,077	6,502,037	1914.....	3,838,419	8,679,582	12,518,001
1905.....	2,562,189	3,076,420	5,638,609	1915.....	2,954,465	7,044,987	9,999,452
1906.....	2,602,784	4,115,069	6,717,853	1916.....	3,058,641	5,778,805	8,837,446
1907.....	3,580,587	4,926,167	8,507,054	1917.....	4,005,975	7,855,693	11,861,668
1908.....	3,148,289	4,753,209	7,901,498	1918.....	4,443,524	8,779,033	13,222,557
1909.....	2,925,781	3,996,913	6,922,694	1919.....	4,502,275	8,480,689	12,982,964
1910.....	3,537,201	5,894,574	9,401,775				

TABLE NO. 5.—*Statement showing annual trade balance resulting from the commerce between Porto Rico and other ports.*

Fiscal years.	Imports.	Exports.	Balance.	
			In favor of the island.	Against the island.
1901.....	\$8,918,136	\$8,583,967	.....	\$331,169
1902.....	13,209,610	12,433,956	.....	775,654
1903.....	14,449,286	15,089,079	.....	\$639,793
1904.....	13,169,029	16,265,903	.....	3,096,874
1905.....	16,536,259	18,709,565	.....	2,173,306
1906.....	21,827,665	23,257,530	.....	1,429,865
1907.....	29,267,172	26,996,300	.....	2,270,872
1908.....	25,825,665	30,644,490	.....	4,818,825
1909.....	26,544,326	30,391,225	.....	3,846,899
1910.....	30,631,855	37,960,219	.....	7,328,364
1911.....	38,786,997	39,918,367	.....	1,131,370
1912.....	42,972,891	49,705,413	.....	6,732,522
1913.....	36,900,062	49,103,565	.....	12,203,503
1914.....	36,406,787	43,102,762	.....	6,695,975
1915.....	33,884,296	49,356,907	.....	15,472,611
1916.....	38,951,156	66,731,573	.....	27,780,417
1917.....	53,545,224	80,970,917	.....	27,425,693
1918.....	63,389,282	74,291,022	.....	10,901,740
1919.....	62,400,360	79,496,010	.....	17,095,680

Breadstuffs amounting to \$17,351,110 were imported during the year, of which \$16,890,964 came from the United States and \$460,146 from foreign countries. These figures show an increase of \$3,795,560 over the preceding year. The principal items were rice, valued at \$11,668,992, and wheat flour, at \$4,368,080, representing increases

CHART SHOWING GENERAL INCREASE OF IMPORTS AND EXPORTS AND TOTAL TRADE
BETWEEN PORTO-RICO AND THE MAINLAND OF THE UNITED STATES AND OTHER COUNTRIES FROM
1901-1919



Year	Imports	Exports	Total
1901	\$10,000,000	\$10,000,000	\$20,000,000
1902	\$12,000,000	\$12,000,000	\$24,000,000
1903	\$14,000,000	\$14,000,000	\$28,000,000
1904	\$16,000,000	\$16,000,000	\$32,000,000
1905	\$18,000,000	\$18,000,000	\$36,000,000
1906	\$20,000,000	\$20,000,000	\$40,000,000
1907	\$22,000,000	\$22,000,000	\$44,000,000
1908	\$24,000,000	\$24,000,000	\$48,000,000
1909	\$26,000,000	\$26,000,000	\$52,000,000
1910	\$28,000,000	\$28,000,000	\$56,000,000
1911	\$30,000,000	\$30,000,000	\$60,000,000
1912	\$32,000,000	\$32,000,000	\$64,000,000
1913	\$34,000,000	\$34,000,000	\$68,000,000
1914	\$36,000,000	\$36,000,000	\$72,000,000
1915	\$38,000,000	\$38,000,000	\$76,000,000
1916	\$40,000,000	\$40,000,000	\$80,000,000
1917	\$42,000,000	\$42,000,000	\$84,000,000
1918	\$44,000,000	\$44,000,000	\$88,000,000
1919	\$46,000,000	\$46,000,000	\$92,000,000

Imports
Exports
Total

of \$2,429,541 and \$1,087,120 over the previous year. Importations of cotton goods took a decline of \$1,435,671 from \$8,558,603 in 1917-18 to \$7,122,932 this year; cars and carriages, valued at \$1,246,140, declined \$316,667; fertilizers valued at \$1,998,549, decreased \$931,177; iron and steel manufactures, \$3,944,409, showed a decrease of \$1,073,932; leather goods, \$1,780,394, showed a decrease of \$579,697; meat, \$4,823,817, decreased \$274,064. Dairy products imported from the United States, valued at \$1,215,430, show an increase of \$152,784 over the preceding year, while the imports of this commodity from foreign countries decreased \$36,024 from \$55,832 in 1917-18 to \$19,808 in 1918-19. The value of jute bags imported from the United States shows a decrease of \$672,310. Importations of fish and fish products from the United States increased by \$233,232, and from foreign countries decreased by \$103,991. The importation of beans and dried peas from the United States were valued at \$1,051,289, and from foreign countries \$25,773, aggregating \$1,077,062, a decrease of \$254,739 from the total of the previous year.

The decrease in purchases of cotton goods, cars, and carriages, iron and steel manufactures, leather goods, and meats is only explainable by reduction of consumption, while the decrease in the purchases of beans and peas, fertilizers, and jute bags has been due to some home production in the first two cases and to the use of second-hand bags in the last one.

TABLE NO. 6.—*Merchandise brought into Porto Rico from the United States and foreign countries during the fiscal year ending June 30, 1919.*

Articles.	Merchandise from United States.		Merchandise imported from foreign countries.	
	Quantity.	Value.	Quantity.	Value.
Agricultural implements.....		\$226, 196		\$45, 544
Animals.....		4, 733		25, 014
Breadstuffs:				
Bread and biscuits..... pounds..	1, 153, 635	213, 745	1, 789	889
Corn meal..... barrels..	22, 913	188, 357		
Oats..... bushels..	128, 466	115, 534		
Wheat flour..... barrels..	387, 961	4, 368, 080		
Rice..... pounds..	155, 069, 940	11, 668, 992	6, 106, 990	482, 674
All other.....		336, 256		6, 883
Candles.....		201, 184		
Cars, carriages, and parts of.....		1, 246, 140		
Cement..... barrels..	122, 787	366, 262		
Chemicals, drugs, dyes, and medicines.....		1, 178, 022		251, 657
Coal..... tons..	79, 495	477, 455	198	2, 112
Cocoa and chocolate, prepared.....		133, 708		62
Cotton, manufactures of:				
Cloths..... yards..	28, 265, 616	3, 659, 357	3, 587	1, 384
All other.....		3, 361, 596		100, 596
Earthen, stone, and chinaware.....		224, 992		831
Explosives.....		10, 701		
Fertilizer..... tons..	21, 317	1, 986, 974	498	11, 575
Fiber, vegetable, and textile grasses:				
Cordage..... pounds..	737, 061	224, 698		
Jute bags..... do.....		415, 448		527, 816
All other.....		141, 755		20, 367
Fish:				
Dried, smoked, or cured..... pounds..	13, 507, 756	1, 383, 100	6, 477, 934	767, 031
All other.....		228, 983		17, 320
Fruits and nuts.....		215, 702		106, 688
Glass and glassware.....		2'6, 635		1, 398
India rubber, manufactures of.....		1, 086, 570		13
Instruments and apparatus, scientific.....		26, 674		
Iron and steel, manufactures of.....		3, 934, 782		9, 627
Leather and manufactures of.....		1, 766, 968		23, 426

TABLE NO. 6.—*Merchandise brought into Porto Rico from the United States and foreign countries during the fiscal year ending June 30, 1918—Continued.*

Articles.	Merchandise from United States.		Merchandise imported from foreign countries.	
	Quantity.	Value.	Quantity.	Value.
Meat and dairy products:				
Meat products—				
Bacon.....pounds..	65,985	\$24,145	213	\$144
Hams and shoulders, cured.....do....	2,762,992	712,460		
Pork, pickled.....do....	6,721,733	1,494,778		
Lard.....do....	2,575,504	730,856		
Lard compounds.....do....	5,221,103	1,256,274		
All other meat products.....do....		568,434		36,726
Dairy products—				
Butter.....pounds..	873,334	261,215	16,092	12,798
Cheese.....do....	2,302,736	449,885	7,901	7,010
Milk, condensed, or evaporated.....do....	3,406,752	504,330		
Musical instruments and parts of.....do....		65,837		2,743
Oils:				
Mineral.....gallons..	6,134,977	1,860,165	13,776,000	304,010
Vegetable.....do....		189,635		244,089
Paints, pigments, and varnishes.....do....		268,531		1,194
Paper, manufactures of.....do....		1,261,114		84,640
Perfumeries, cosmetics, and toilet preparations.....do....		210,457		19,194
Seeds.....do....				5,084
Silk, manufactures of.....do....		335,063		1,869
Soap:				
Toilet or fancy.....do....		135,487		7,265
All other.....do....		868,185		2
Spirits and wines and malt liquors:				
Malt liquors.....gallons..				
Spirits, distilled.....do....				
Wines.....do....			526	766
Champagne.....doz. quarts.				
Sugar, refined.....pounds..	276,172	24,450		
Straw and palm leaf, manufactures of.....do....		83,004		1,890
Tobacco and manufactures of:				
Unmanufactured.....pounds..			896,000	179,200
Manufactures of.....do....		1,022,901		330
Toys.....do....		59,884		
Vegetables:				
Beans and dried peas.....pounds..	205,724	1,051,289	4,566	25,773
Onions.....bushels..	68,167	157,062	4,809	10,027
Potatoes.....do....	293,905	379,796	77	137
All other canned.....do....		132,814		2,123
All other, including pickles and sauces.....do....		10,962		95,947
Wood and manufactures of:				
Boards, deals, planks, and scantlings. M feet..	11,511	444,761	890	32,832
Furniture.....do....		262,412		1,024
All other.....do....		885,014		26,964
Wool, manufactures of.....do....		191,793		106
All other articles.....do....		2,378,414		1,022,342
Total value.....do....		57,898,085		4,502,275

¹ These figures include chiefly \$397,053 worth of sugar cane imported from the Dominican Republic and also great quantities crude cocons, tobacco, hides, beeswax, etc., imported from the same country in transit to continental United States.

TABLE NO. 7.—*Domestic and foreign merchandise shipped from Porto Rico to the United States and foreign countries during the fiscal year ending June 30, 1919.*

Articles.	Domestic merchandise shipped to the United States.		Domestic merchandise shipped to foreign countries.	
	Quantity.	Value.	Quantity.	Value.
Beeswax.....pounds..	53,058	\$15,923	120	\$12
Cocoa.....do.....	62,945	10,155		
Coffee.....do.....	276,520	68,942	27,621,442	5,906,631
Cotton, sea-island.....do.....	211,764	106,799		
Fruits and nuts:				
Fruits—				
Green, ripe, or dried—				
Grapefruit.....boxes..	417,369	739,106		
Oranges.....do.....	373,679	760,226	225	1,077
Pineapples.....do.....		458,675		
All other.....do.....		9,895		941
Canned—				
Pineapples.....do.....		148,662		
All other.....do.....		9,860		1,976
Prepared or preserved pineapples.....do.....				1,513
Nuts—Coconuts.....do.....		756,233		1,416
Hides and skins, other than fur skins.....pounds..	1,386,195	335,509	771	946
Honey.....do.....	3,817,081	666,457		
Leather, sole.....do.....			7,738	3,649
Meat products, tallow.....do.....	33,290	5,096	38,436	5,502
Perfumeries, cosmetics, etc.: Bay rum.....do.....		93,227		
Seeds:				
Annatto.....pounds..	241,197	13,157		
Cotton.....do.....			150,080	3,085
Spirits distilled, alcohol.....per gallon..	25,951	17,631	46,325	20,710
Straw hats.....do.....		67,130		15,401
Sugar and molasses:				
Sugar.....short tons..	351,643	48,091,799	267	40,620
Molasses.....gallons..	15,118,678	1,507,101	900,000	18,600
Tobacco and manufactures of:				
Manufactures of—				
Cigarettes.....M.....	18,139	108,942	751	1,631
Cigars.....M.....	149,335	6,647,621	463	9,901
Unmanufactured—				
Leaf.....pounds..	12,460,316	7,259,709	2,136,660	304,136
Scrap.....do.....	3,203,770	351,138	58,813	5,600
All other domestic articles.....do.....		1,752,425		1,984,270
Total exports of domestic merchandise.....do.....		70,510,388		8,426,949
Total exports of foreign merchandise.....do.....		504,963		53,740
Total exports of domestic and foreign merchandise.....do.....		71,015,351		8,480,689

The sugar exports to the United States amounted to 351,643 short tons, valued at \$48,091,799. In addition 267 tons valued at \$40,620 were shipped to foreign countries. These figures represent an increase of 15,122 tons over the shipments of the previous year. The total production of 1919 was 406,000 tons, or 47,795 tons less than the crop of 1918. The sugar exports of 1918-19 include shipment of 793,000 sacks of sugar, making a total of 123,708 tons, which were awaiting shipment on July 1, 1918, from the crop of that year. The sugar exports of the island were embargoed for nearly four weeks during April and May, 1919, and consequently the 40,000 tons per month allotted to Porto Rico could not be shipped regularly. There were on the island on the 1st of July, 1919, about 147,000 tons of sugar awaiting shipment.

TABLE NO. 8.—*Sugar exports.*

Fiscal year.	Short tons.	Value.	Average price per ton.	Fiscal year.	Short tons.	Value.	Average price per ton.
1901.....	68,909	\$4,715,611	\$68.43	1911.....	322,919	\$24,479,346	\$75.81
1902.....	91,912	5,890,302	64.08	1912.....	367,145	31,544,063	85.92
1903.....	113,108	7,470,122	66.04	1913.....	382,700	26,619,158	69.55
1904.....	129,647	8,690,814	67.03	1914.....	320,633	21,240,335	63.12
1905.....	135,663	11,925,804	87.90	1915.....	294,475	27,278,754	92.64
1906.....	205,277	14,184,667	69.10	1916.....	424,955	45,809,445	107.79
1907.....	204,079	14,770,683	72.37	1917.....	488,943	54,015,903	110.17
1908.....	234,637	18,690,304	76.12	1918.....	336,788	41,362,229	122.81
1909.....	244,257	18,432,446	75.46	1919.....	351,910	48,132,419	136.77
1910.....	284,522	23,545,922	82.75				

The exportations of unmanufactured tobacco amounted to 17,859,559 pounds, valued at \$8,420,583, representing an increase of 663,236 pounds with a decrease in value of \$561,547 as compared with previous year's figures.

TABLE NO. 9.—*Cigars.*

Fiscal years.	Withdrawn for consumption.	Withdrawn for export.	Total output.	Fiscal years.	Withdrawn for consumption.	Withdrawn for export.	Total output.
1907.....	74,698,430	132,669,823	207,368,253	1914.....	122,711,543	150,363,991	263,075,534
1908.....	76,983,830	108,781,719	185,765,549	1915.....	101,423,083	174,275,407	275,698,490
1909.....	84,983,260	140,302,271	225,235,531	1916.....	109,130,296	159,248,855	268,379,151
1910.....	92,700,160	151,724,438	244,424,598	1917.....		210,399,365	
1911.....	101,064,495	174,743,098	275,807,593	1918.....	106,646,685	181,779,519	288,426,204
1912.....	111,682,615	169,765,656	281,448,271	1919.....	94,334,802	149,124,690	243,459,497
1913.....	119,088,300	165,768,512	284,856,812				

¹ Treasury figures.

TABLE NO. 10.—*Cigarettes.*

Fiscal years.	Withdrawn for consumption.	Withdrawn for export.	Total output.	Fiscal years.	Withdrawn for consumption.	Withdrawn for export.	Total output.
1907.....	347,722,000	10,460,000	358,182,000	1914.....	376,695,120	6,195,000	382,890,120
1908.....	354,407,900	11,232,424	365,640,324	1915.....	339,080,165	12,020,750	351,100,915
1909.....	365,525,500	11,244,500	376,770,000	1916.....	308,025,865	11,786,430	319,811,295
1910.....	393,844,300	13,142,000	406,986,300	1917.....		9,571,250	
1911.....	459,710,045	11,780,000	471,470,045	1918.....	340,077,040	6,439,600	346,516,640
1912.....	532,431,000	11,293,350	543,724,350	1919.....	426,582,000	20,111,600	446,693,600
1913.....	464,861,210	8,907,600	473,768,810				

¹ Treasury figures.

TABLE NO. 11.—*Tobacco leaf and scrap exported.*

Fiscal years.	Pounds.	Value.	Fiscal years.	Pounds.	Value.
1907.....	4,344,659	\$1,232,058	1914.....	9,244,490	\$3,206,610
1908.....	8,402,286	1,996,055	1915.....	9,285,333	3,204,423
1909.....	1,539,320	1,250,237	1916.....	8,084,914	3,033,149
1910.....	4,176,172	1,258,317	1917.....	9,408,723	3,850,670
1911.....	4,450,012	1,554,783	1918.....	17,196,323	8,982,130
1912.....	5,456,751	2,320,130	1919.....	17,859,559	8,420,583
1913.....	8,636,776	3,188,227			

CHART SHOWING INCREASE IN QUANTITY OF
SUGAR EXPORTED FROM PORTO-RICO
1901-1919.

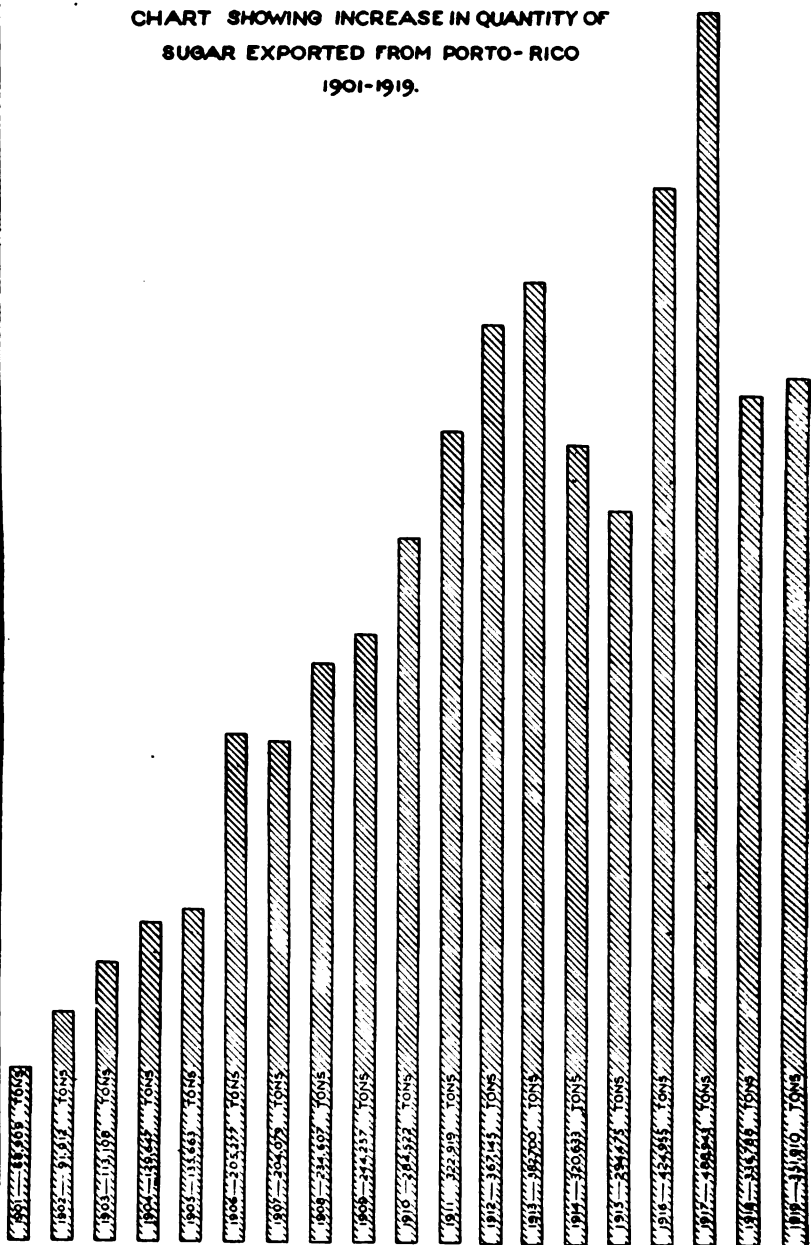
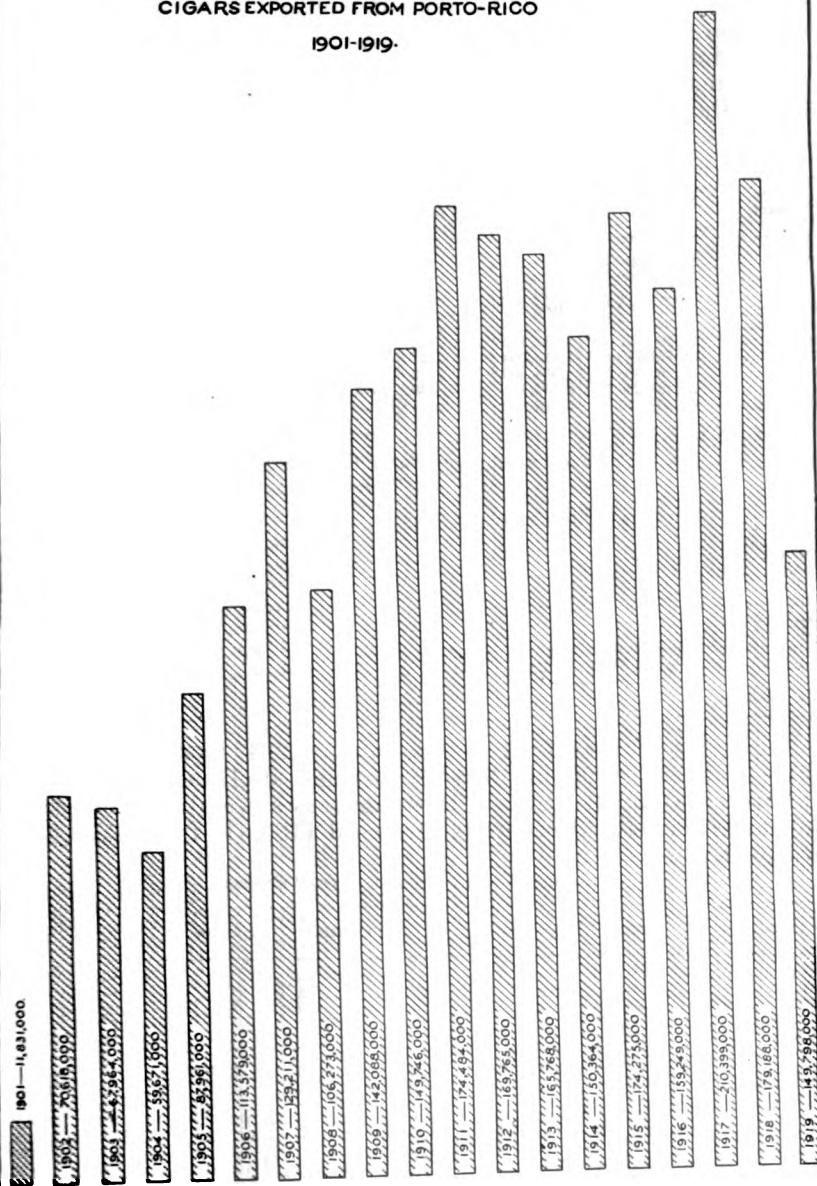


CHART SHOWING INCREASE IN NUMBER OF
CIGARS EXPORTED FROM PORTO-RICO
1901-1919.



The exportations of coffee to the United States amounted to 276,529 pounds, valued at \$68,942; and to foreign countries, 27,621,442 pounds, valued at \$5,996,631. These figures represent an increase of 19,832 pounds with a value of \$29,878 over the previous year with the United States. Although shipments to foreign countries decreased 9,740,474 pounds in quantity still the value increased \$530,379 as compared with the previous year. This change has been possible because of the good price coffee has had on the market during the year 1918-19, \$0.217 per pound, against \$0.146 the year before.

TABLE NO. 12.—*Coffee exports.*

Fiscal years.	Pounds.	Value.	Average price.	Fiscal years.	Pounds.	Value.	Average price.
1901.....	12,157,240	\$1,678,765	\$0.137	1911.....	33,937,021	\$4,992,779	\$0.147
1902.....	26,906,399	3,195,662	.118	1912.....	40,146,365	6,754,913	.168
1903.....	35,207,139	3,970,574	.112	1913.....	49,774,197	8,511,316	.171
1904.....	34,326,972	3,903,257	.113	1914.....	50,211,947	8,193,544	.163
1905.....	16,849,789	2,141,069	.127	1915.....	51,125,620	7,082,791	.138
1906.....	28,299,322	3,481,102	.123	1916.....	32,144,283	5,049,283	.157
1907.....	38,756,750	4,683,064	.121	1917.....	39,615,146	5,892,081	.149
1908.....	35,256,489	4,304,909	.122	1918.....	37,618,613	5,505,316	.146
1909.....	28,489,236	3,715,744	.130	1919.....	27,897,971	6,065,573	.217
1910.....	45,209,792	5,669,602	.125				

TABLE NO. 12a.—*Coffee exported from Porto Rico during the fiscal year ended June 30, 1919.*

Countries.	Pounds.	Value.
France.....	492,364	\$149,627
Spain.....	11,690,537	2,528,538
Cuba.....	15,396,150	3,317,937
Virgin Islands.....	5,919	1,040
Canary Islands.....	27,472	4,599
Total exported to foreign countries.....	27,621,442	5,996,631
Total shipped to United States.....	276,529	68,942
Totals.....	27,897,971	6,065,573

Shipments of grapefruit decreased \$381,224, from \$1,120,330 in 1917-18 to \$739,106 in 1918-19; oranges declined \$461,248; and pineapples \$158,821. All of these decreases were due to shipping difficulties mostly. Cocoanuts increased \$185,049 from \$572,600 to \$757,649.

TABLE NO. 13.—*Value of fruit exports.*

Fiscal year.	Oranges.	Pineapples.	Canned pineapples.	Cocoanuts.	Grapefruit.	Other fruits.	Total.
1901.....	\$84,475	(1)	(1)	\$8,334	(1)	\$16,992	\$109,801
1902.....	51,364	(1)	(1)	12,720	(1)	9,898	73,982
1903.....	230,821	(1)	(1)	326	(1)	61,956	293,103
1904.....	352,646	(1)	(1)	(1)	(1)	81,214	433,860
1905.....	125,422	(1)	(1)	(1)	(1)	130,478	255,900
1906.....	295,633	\$27,826	\$42,186	129,793	(1)	7,420	502,866
1907.....	469,312	64,831	63,519	174,957	\$7,596	3,737	783,942
1908.....	630,720	172,779	98,203	206,704	44,535	11,320	1,164,261
1909.....	401,912	442,780	117,830	204,498	76,310	18,154	1,261,484
1910.....	582,716	555,044	106,587	218,870	162,749	9,851	1,635,817
1911.....	708,969	641,291	149,744	258,168	309,698	11,123	2,073,993
1912.....	584,414	684,774	258,671	308,883	525,048	15,972	2,377,762
1913.....	740,091	1,142,348	147,594	353,690	726,811	10,415	3,120,919
1914.....	752,180	1,246,001	175,534	451,882	751,769	23,537	3,400,903
1915.....	378,181	1,723,863	84,735	410,378	834,440	9,560	3,441,157
1916.....	790,797	1,176,406	122,876	413,573	837,014	14,619	3,355,265
1917.....	1,009,737	916,415	134,765	438,564	939,677	18,411	3,459,569
1918.....	1,231,551	617,496	75,216	572,600	1,120,330	11,021	3,628,214
1919.....	770,303	458,675	148,662	757,649	739,106	24,185	2,898,580

¹ Shipments included under "Other fruits."

CHART SHOWING THE QUANTITY OF COFFEE
EXPORTED FROM PORTO-RICO
DURING THE YEARS
1901-1919

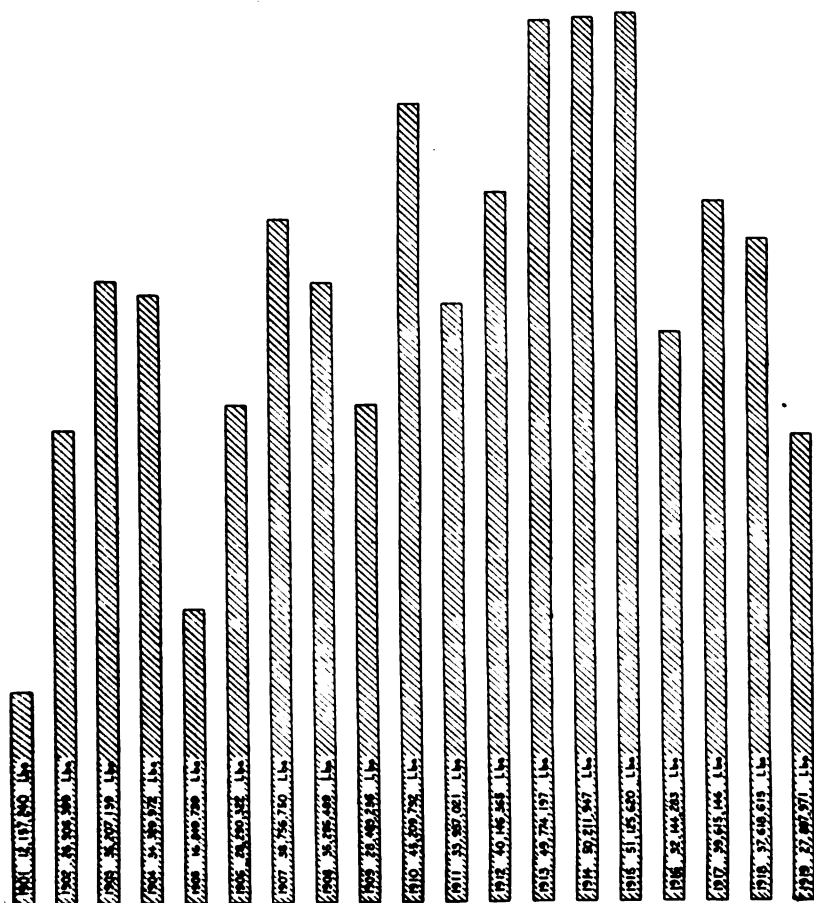
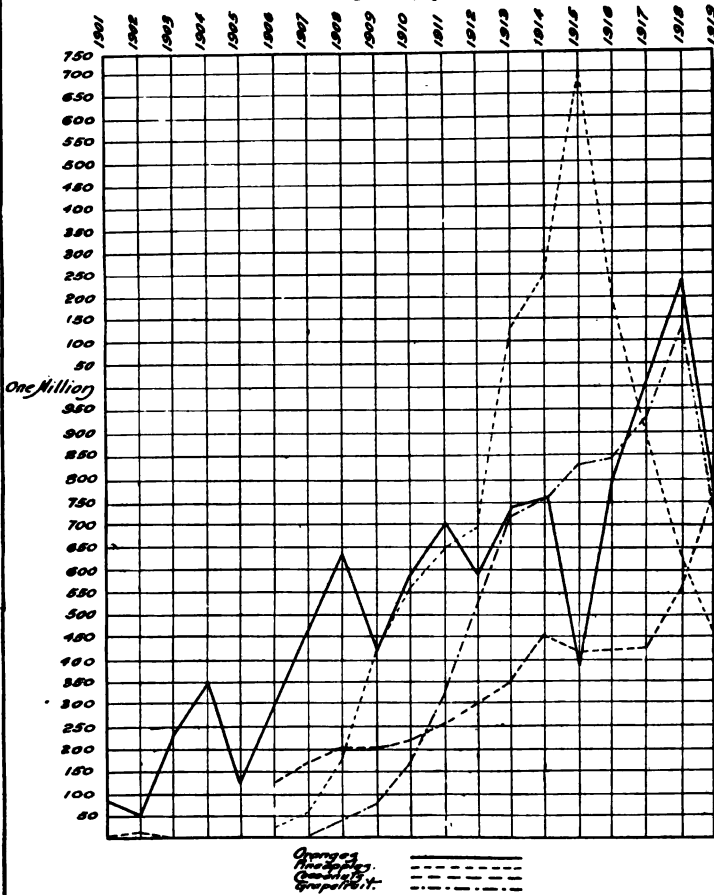


CHART SHOWING INCREASE IN THE VALUE OF ORANGES
PINEAPPLES, COCOANUTS AND GRAPEFRUIT EXPORTED FROM
PORTO RICO FROM
1901-1919.

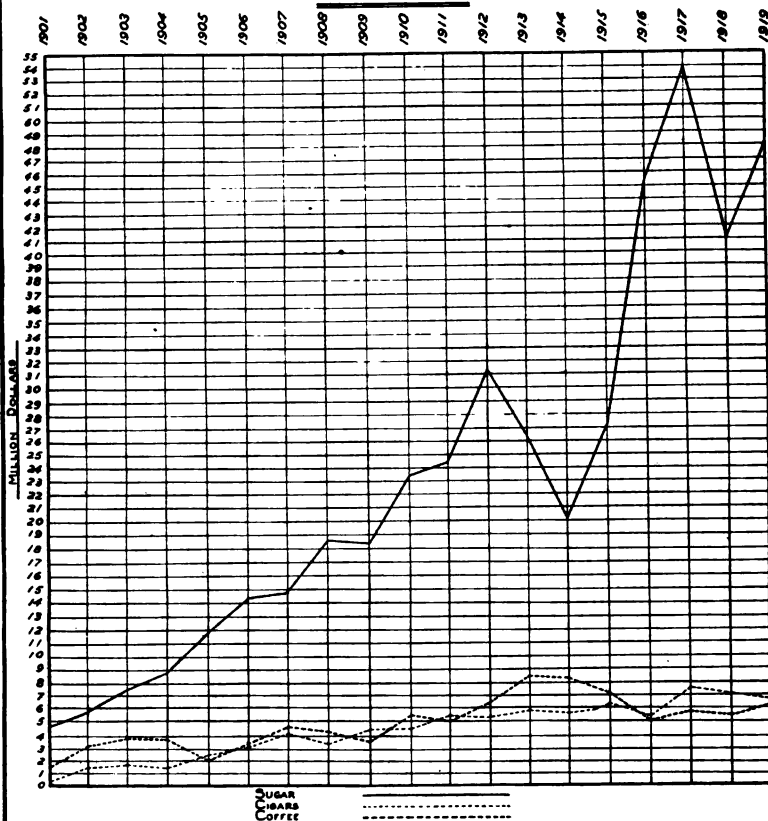


Fiscal Year.	Oranges.	Pineapples.	Cocoanuts.	Grapefruit.
1901	\$ 84,476	()	\$ 2,334	()
1902	51,364	()	12,720	()
1903	230,221	()	326	()
1904	322,646	()	()	()
1905	126,422	()	()	()
1906	225,633	27,226	123,793	()
1907	462,212	64,231	174,627	\$ 7,686
1908	632,720	172,773	206,704	44,535
1909	401,312	442,780	204,438	76,310
1910	522,716	556,044	218,270	162,743
1911	703,262	641,231	252,168	303,638
1912	824,414	624,774	302,223	325,048
1913	740,021	1,142,342	323,230	726,811
1914	722,120	5246,001	421,222	751,763
1915	872,121	5722,223	410,378	824,440
1916	720,727	1,172,422	413,373	827,014
1917	402,727	212,412	222,224	322,277
1918	423,551	617,422	272,222	1,122,320
1919	770,223	422,275	727,222	722,102

TABLE NO. 14.—Statement by countries of value of merchandise brought into Porto Rico from the United States and foreign countries for five years ending June 30, 1919.

Countries.	Shipped into Porto Rico.				
	1915	1916	1917	1918	1919
United States.....	\$30,929,831	\$35,892,515	\$49,539,249	\$58,945,758	\$57,898,085
Austria-Hungary.....	5,043				
Belgium.....	16,083	370			
Denmark.....	90,026	80,979	85,252	54,231	19,348
France.....	149,069	144,209	157,101	147,211	86,734
Germany.....	139,373	1,011			
Italy.....	76,033	61,551	66,734	51,720	39,621
Netherlands.....	159,078	23,805	3,927	1,131	
Norway.....	4,446	15,746	9,705		
Spain.....	679,415	650,317	985,370	523,041	600,621
Sweden.....	1,296	23,146	32,141	23,767	12,115
Switzerland.....	2,911	295		4,002	8,276
United Kingdom.....	339,681	351,011	191,122	253,732	149,316
Canada.....	506,328	661,183	776,482	863,550	771,912
Costa Rica.....		30			
Mexico.....	87,986	212,520	251,269	237,236	309,415
Panama.....	13				942
Newfoundland.....	8,272	12,142	93,058	38,021	18,087
West Indies:					
British.....	735		10	430	994
Cuba.....	68,871	65,574	73,966	85,634	87,302
Dominican Republic.....	234,356	382,447	595,450	1,166,859	1,089,403
Dutch.....	7,224	6,309	35,235	43,346	33,564
French.....	1,350	14,419	4,685	1,652	443
Haiti.....		16	1,666	1,652	200
Virgin Islands.....	4,868	29,060	20,016	29,345	56,003
Argentina.....	69,560	36,336	14,958		
Brazil.....		14	19,955		101,776
Chile.....			27,251	162,313	131,111
Colombia.....	5,295	7,340	433	887	8,771
Ecuador.....	184		30		146
British Guiana.....			453		
Peru.....	111	1,244	1,928	3,678	2,232
Uruguay.....	28,113	4,457	31,831	81,196	28,443
Venezuela.....	16,232	11,588	17,650	54,823	71,380
China.....					13,325
East Indies:					
British India.....	205,928	196,917	446,727	471,182	609,911
French East Indies.....					81,975
Hongkong.....	118				9,291
Japan.....	291	1,316	7,371	97,467	173,821
Siam.....					25,924
Canary Islands.....	50,241	54,461	54,199	24,918	9,813
British East Africa.....		18,828			
Tripoli.....	5				
Total.....	33,884,296	38,951,156	53,545,224	63,389,282	62,400,380

CHART SHOWING INCREASE IN THE VALUE OF
THREE PRINCIPAL PRODUCTS EXPORTED FROM
PORTO-RICO NAMELY SUGAR, CIGARS and COFFEE FROM
1901-1919.



Fiscal Year	Sugar	Cigars	Coffee
1901	4,715,611	306,115	1,678,765
1902	5,890,302	1,548,235	3,195,662
1903	26,701,222	1,753,795	3,970,574
1904	8,690,814	1,460,496	3,903,257
1905	14,925,804	2,152,051	2,141,009
1906	14,184,667	3,074,226	3,481,102
1907	14,770,682	4,241,410	4,692,004
1908	18,690,504	3,414,140	4,304,609
1909	18,432,446	4,383,893	3,715,744
1910	23,545,922	4,480,030	5,663,602
1911	24,479,346	5,355,223	4,992,779
1912	31,544,063	5,086,711	6,754,913
1913	24,619,158	5,800,686	8,611,316
1914	20,240,335	5,597,276	8,193,544
1915	27,278,754	6,016,122	7,082,791
1916	45,809,445	5,531,535	5,043,283
1917	54,015,903	7,843,010	5,892,081
1918	41,362,229	7,134,693	5,505,316
1919	48,132,419	6,652,522	6,066,573

TABLE No. 15.—Statement by countries of value of merchandise shipped from Porto Rico to the United States and foreign countries for the past five years ending June 30, 1919.

Countries.	Shipped from Porto Rico.				
	1915	1916	1917	1918	1919
United States.....	\$42,311,920	\$60,952,768	\$73,115,224	\$65,514,989	\$71,015,351
Austria-Hungary.....	1,630				
Denmark.....	28,557				
France.....	815,527	276,091	567,046	229,724	149,527
Germany.....	21,369				
Gibraltar.....	7,143	1,566			8,296
Italy.....	733,354	401,551	39,292	259	
Mexico.....		2,058			
Netherlands.....	146,065	86,456	174		
Norway.....	13,464	9,530			
Spain.....	1,876,106	1,293,378	1,837,874	1,651,161	2,855,450
Sweden.....	140,910	253,696			
United Kingdom.....	6,300	33,507	53,880	155,684	10,000
Canada.....	22	85			300
West Indies:					
British.....	2,593	18,589	4,745	15,465	14,816
Cuba.....	2,790,771	2,781,292	3,561,478	3,806,504	3,418,698
Virgin Islands.....	23,780	39,505	298,653	312,226	210,618
Dutch.....	34,436	71,322	106,100	67,623	88,621
French.....	13,673	62,267	54,537	113,475	50,568
Haiti.....		1,376		11,213	7,258
Dominican Republic.....	223,645	276,992	1,257,000	2,361,770	1,585,348
Argentina.....	31,958	13,571			
Colombia.....	21,799	50,050			11,605
Uruguay.....	777	150			
Venezuela.....	89,792	30,425	16,863	31,459	41,424
Philippine Islands.....	7,942				
Canary Island.....	11,624	75,634	49,891	19,099	27,855
Spanish Africa.....	1,750	1,660	1,623		
Brazil.....			2,200		
Dutch East Indies.....			2,841		
Chile.....				291	
Peru.....					182
Dutch Guiana.....					126
Total.....	49,356,907	66,731,573	80,970,917	74,294,022	79,496,040

TABLE No. 16.

Fiscal year.	Sugar.	Cigars.	Coffee.	Fiscal year.	Sugar.	Cigars.	Coffee.
1901.....	\$4,715,611	\$306,115	\$1,678,765	1911.....	\$24,479,346	\$5,355,223	\$4,992,779
1902.....	5,890,302	1,549,235	3,195,682	1912.....	31,544,063	5,086,711	6,754,913
1903.....	7,470,122	1,763,795	3,970,574	1913.....	26,619,158	5,800,686	8,511,316
1904.....	8,690,814	1,460,496	3,903,257	1914.....	20,240,335	5,597,276	8,193,544
1905.....	11,925,804	2,152,051	2,141,009	1915.....	27,278,754	6,016,122	7,062,791
1906.....	14,184,667	3,074,226	3,481,102	1916.....	45,809,445	5,531,535	5,049,283
1907.....	14,770,682	4,241,410	4,093,004	1917.....	54,015,903	7,843,010	5,892,081
1908.....	15,660,504	3,414,140	4,304,009	1918.....	41,362,229	7,134,693	5,505,316
1909.....	18,432,446	4,383,963	3,715,744	1919.....	48,132,419	6,657,522	6,065,573
1910.....	23,545,922	4,488,080	5,669,002				

TABLE No. 17.

Fiscal year.	Imports.	Exports.	Total.	Fiscal year.	Imports.	Exports.	Total.
1901.....	\$8,918,136	\$8,583,967	\$17,502,103	1911.....	\$38,786,967	\$39,918,367	\$78,705,364
1902.....	13,209,610	12,433,966	25,643,566	1912.....	42,672,801	49,705,413	92,378,204
1903.....	14,449,286	15,089,079	29,538,365	1913.....	36,000,062	49,103,565	85,003,627
1904.....	13,169,029	16,265,903	29,434,932	1914.....	36,406,787	43,162,762	79,569,549
1905.....	16,536,259	18,709,565	35,245,824	1915.....	33,884,216	49,356,007	83,241,203
1906.....	21,827,665	23,257,580	45,085,195	1916.....	38,951,156	66,731,573	105,682,729
1907.....	29,267,172	26,996,300	56,263,472	1917.....	53,545,224	80,970,917	134,516,141
1908.....	25,825,665	30,644,490	56,470,155	1918.....	63,389,212	74,294,022	137,683,304
1909.....	26,544,326	30,391,225	56,935,551	1919.....	62,400,360	79,496,040	141,896,400
1910.....	30,634,855	37,980,219	68,615,074				

LEGISLATION.

The legislation placed upon the statute books during the year is unusually voluminous and unusually important. In the first place it should be mentioned that nine acts and two joint resolutions passed by the legislature in the last days of the session ending November 26, 1917, and not signed by the governor, were promulgated as laws by virtue of a decision of the supreme court of Porto Rico, dated March 11, 1919, declaring that the legislature had the power to take a long recess of 70 days after the expiration of the first 90 days of its regular session. None of these measures is of great importance, but it is highly important that the legal point involved in the interpretation of the organic act should be definitely decided, and in due time an effort will be made to have the matter passed upon by the higher courts.

In addition to these laws there were passed during the special session of the legislature called to meet on November 26, 1918, eight acts and four joint resolutions, practically all of them intended to provide funds and formulate measures for the relief of the victims and repair of the damages due to the earthquakes and epidemic of influenza. The second regular session of the ninth legislature assembled pursuant to law on the 10th day of February, 1919, and continued in session until July 6; 85 acts and 36 joint resolutions were passed and approved by the governor. Those of the greatest importance may be briefly mentioned as follows:

(1) A new election law, greatly changing the machinery and methods of holding elections and providing for compulsory voting and for more honest elections.

(2) A new municipal law abolishing practically all of the municipal institutions heretofore existing and providing for the municipalities a larger autonomy, more ample revenues, and a commission form of government, with the commissioners chosen by indirect election.

(3) Laws for increasing the revenues by increased income and excise taxes.

(4) A grand jury law introducing for the first time into Porto Rico the well-known American method of indictment for criminal offenses.

(5) Irrigation law providing for public irrigation of about 15,000 acres of dry lands in the northwestern part of the island.

(6) Labor laws, the chief of which are (a) an amendment to the homestead law, providing funds to assist workmen in securing homes of their own; (b) arbitration law creating a board to assist in the peaceful settlement of labor disputes; (c) minimum wage law, establishing a minimum rate of pay for women and girls engaged in industrial occupations.

(7) An act authorizing that the amount of reimbursement to the Federal Government for work of dredging the harbor of San Juan and reclaiming swamps be increased to \$1,200,000.

(8) Act authorizing an issue of \$1,000,000 of bonds for construction of roads and bridges.

(9) Several acts providing funds and methods for relief of sufferers from earthquake and epidemic, etc. A complete list of all of these laws is published in Appendix I, Exhibit A, of this report.

EXECUTIVE.

PROCLAMATIONS.

Formal proclamations, including rules and regulations prepared by the insular board of health and approved by the executive council in accordance with the sanitary law, were promulgated in the form of administrative bulletins, as follows:

- No. 146.—September 4, 1918; Lafayette day proclamation.
 No. 147.—October 5, 1918; Liberty day proclamation.
 No. 148.—October 16, 1918; military registration proclamation.
 No. 149.—November 22, 1918; proclamation calling a special session of the legislature.
 No. 150.—November 23, 1918; Thanksgiving proclamation.
 No. 151.—February 27, 1919; Red Cross week proclamation.
 No. 152.—May 21, 1919; promulgating substitute to sanitary rules and regulations concerning the registration of patent medicines.
 No. 153.—May 21, 1919; promulgating amendments to sanitary rules and regulations concerning plumbing, sewerage, and gas fitting in Porto Rico.
 No. 154.—May 21, 1919; promulgating sanitary rules and regulations concerning construction in cities, towns, and villages; and amendments to sanitary rules and regulations concerning the keeping of houses, edifices, and outhouses in sanitary condition.

PARDONS AND PAROLES.

During the fiscal year 1918–19, the governor received 665 petitions for clemency.

The following statement shows the number of petitions received and the action taken thereon:

Applications for clemency granted:

Full pardons.....	25
Conditional pardons.....	133
Paroles.....	30
Sentences commuted.....	6
Fines remitted.....	2
Costs remitted.....	1
Civil rights restored.....	8
	<hr/>
	205
Denied after investigation and consideration.....	369
Filed without consideration.....	61
Cases in which term expired during investigation and consideration.....	6
Pending.....	24
	<hr/>
Total.....	665
Commutations of sentences and pardons granted on Nov. 6, 1918, among prisoners in the Aguadilla district jail for services rendered in connection with the earthquakes.....	31

HEALTH AND SANITATION.

In spite of the severe strain placed upon the department of health by the epidemic already referred to, the regular work of the department was carried on throughout the year with commendable zeal and energy. With a great calamity like the epidemic which swept over the whole island it was quite impossible to prevent a large increase in the death rate which rose to 31.75 as compared with 27.71 the previous year. The total deaths from influenza and its complications was 10,888. Deducting this number from the total for the

year leaves 29,086. Of this latter number 15,575 were listed as infant mortality, children under five years of age. This is a huge number but still slightly below the figures for either of the two preceding years.

The number of deaths from tuberculosis was 2,764, from malaria 1,576, and from uncinariasis 1,059. These are the four great factors which produce the death rate of Porto Rico, having together caused 20,974, or 72 per cent of the total deaths. Steps have been taken and funds provided to wage a major offensive against the three last named diseases and it is hoped that the early completion of the tuberculosis sanatorium and the prompt construction of the other hospitals will soon produce beneficial effects. It seems clear, however, that the distressingly heavy infant mortality is fundamentally and closely connected with the social problem of the island, namely, the enormous population relative to the area and industries. It is a physical impossibility that this population should continue to increase indefinitely at the same rate as in the past. The number of births is reported as 53,348, an increase of 10,087 over the figures for the previous year. The excess of births over deaths is 13,374, notwithstanding the severe losses of the epidemic.

Complete information will be found in the report of the commissioner of health published elsewhere in this volume.

PUBLIC ASYLUMS.

Insane asylum.—The insane asylum of Porto Rico was first begun in 1840. The building was finished in 1844 and inaugurated on the 19th of November, 1844, when 23 patients were admitted, 15 men and 8 women. It continued to be used for all cases of insanity until 1861, when a two-story building was constructed for men only. The next step was taken in 1872, when patients were classified as to sex and nature of disease and strict separation established. The institution showed no progress until 1892 when some improvements were made.

In 1899, after the bombardment two new departments were added with sanitary installations and water supply. In 1900 the institution was organized on a scientific basis and since then all modern methods have been constantly applied.

The total number of patients at the end of the fiscal year was 475, or 2 more than in the previous year, distributed as follows: 226 men and 249 women. During the period covered by this report 269 patients were admitted showing an increase of 12 over the previous year's figures. The number of cured cases was 86—52 men and 34 women. Upon the request of relatives 46 men and 20 women were discharged uncured. The number of deaths was 115—64 men and 51 women—making a total of 162 men and 105 women discharged from the institution, and a grand total of 267 cases discharged during the fiscal year 1918-19.

The mortality was caused chiefly by enteritis, tuberculosis, and dysentery, which numbered 54, 13, and 8 victims, respectively. The dysentery, appeared in the form of an epidemic.

Very few repairs and improvements were possible during the year 1918-19 because of limited funds, but it is believed that some changes will be possible out of the new budget.

Blind asylum.—The number of patients in this institution on June 30, 1918, was 93. During the period covered by this report 46 curable cases and 11 incurable ones were admitted, making a total of 150 patients in the asylum during the year. Out of this number 113 were discharged, distributed as follows: 41 cured, 66 upon request, not cured, and 6 died, leaving a total of 37 at the close of the fiscal year 1918-19. Thirty-one operations were performed. There were 69 cases of common diseases with only 6 deaths during the entire fiscal year.

CHARITY SCHOOLS.

Boys' charity school.—This institution had 276 inmates on June 30, 1918, admitted 55 during the year and discharged 50, leaving a total on June 30, 1919, of 281, distributed as follows: 209 whites and 72 colored. The work has been conducted in the usual way and promotions have been satisfactory. The shoe shop was attended by 44 pupils, the carpenter shop by 37, the plumber shop by 36, and the construction shop by 30.

Some of the inmates prior to their discharge had passed the civil service examinations and two who took the journeymen plumber's examination were also approved.

Girls' charity school.—At the close of the year there were 179 girls in the school. During the year 29 were admitted and 25 discharged. The health of the inmates has been good in general. During the epidemic of influenza there were 58 cases reported but no deaths. This school has been full to its capacity the whole year and the admission has been regulated so as to make possible a uniform distribution amongst all municipalities.

INSULAR BOARD OF HEALTH.

Our modern sanitary organization dates back to the period of the American occupation, when the board of health was created by the military government.

From that time to date all bodies intrusted with the task of directing public health activities have worked under one program, to wit; necessary sanitary legislation; competent personnel; and sufficient funds to defray expenses of a good sanitary administration.

The law of 1911 creating a service of sanitation conferred executive powers upon the insular board of health but this brought friction with the department of sanitation and a new law was subsequently enacted vesting the board with legislative powers and making it an advisory board. In practice the second scheme has worked with success.

During the fiscal year the board has held its regular sessions and many extraordinary sessions to dispatch the numerous important matters brought to its attention. Several necessary amendments to existing regulations have been promulgated. New points have also been covered by new regulations. The board is now contemplating the enactment of regulations on many important public matters now in their hands and under careful study.

On the 24th of September, 1918, the insular board of health, after having read the communications of the commissioner of health, the governor of Porto Rico, circular No. 7 of the health department, and

after having thoroughly studied the report of Dr. King, recommended to the commissioner of health the acceptance of the Federal cooperation in the special district of Camp Las Casas.

On November 8, 1918 a session was held and the commissioner of health personally reported the existence of a large number of influenza cases in many parts of the island. This board, considering the seriousness of the situation and the rapidity with which the disease spreads, recommended that the island be considered in a state of epidemic and that the governor's approval of said action be obtained. This resolution was accepted and in a short time the disease was reported under control.

The insular board of health has also taken a warm interest in the campaign against the white plague and their efforts have brought donations for the construction of houses in the sanatorium for tuberculous patients.

The board since the approval of a law in 1917 has been constantly working on the draft of the Health Code which was submitted to the last legislature.

INSTITUTE OF TROPICAL MEDICINE AND HYGIENE.

During the Spanish régime there was no organization or institution in this island devoted to scientific investigations in any way resembling the present work of the Institute of Tropical Medicine and Hygiene. The only body in existence was one called "Royal sub-delegation of medicine" with powers similar to those of our present board of medical examiners.

The first step in this direction after the American occupation was taken when the superior board of health was organized and a laboratory equipped to make scientific investigations.

Next came the discovery of anemia by Dr. Ashford and this finally led to the passage of a law in 1904 which created the "Porto Rico anemia commission." The governor appointed three physicians to carry out the work, and this commission was continued until 1908, establishing in various parts of the island dispensaries for the treatment of uncinariasis.

In 1908 the organization was modified by legislative action and this work under the name of "The anemia dispensary service" was made a bureau of the department of health, charities, and correction. In 1909 the legislature provided for the "tropical and transmissible disease service," which in 1911 by the new law of sanitation was made a part of the bureau of transmissible diseases.

It was not until 1912 that the law creating the Institute of Tropical Medicine and Hygiene of Porto Rico was passed. Subsequent modifications were made in 1913, 1914, and 1919.

The law of 1914 created the institute as a separate unit subject only to the governor. Drs. González Martínez and Gutiérrez Igaravidez were appointed as permanent members and Drs. Ashford and King as collaborators.

The work has been characterized by a steady progress. Expeditions have been made to Barceloneta where 3,000 patients were treated. Also valuable information has been given out in numerous investigations of dengue, suspected yellow fever, sprue, and other tropical diseases.

During the period covered by this report 93 patients with sprue were treated, 443 mycologic, and 146 serologic analyses were made. For various diseases the institute made 2,396 analyses and laboratory investigations and 2,917 microscopic examinations.

INSULAR POLICE.

The insular police performed their important duties in such a manner as to maintain the high standard of efficiency which the public have come to expect. The close of the war and the demobilization of the National Army made it possible to secure the return to the police force of those officers and guardsmen who had entered the military service. Quite a large number of excellent and experienced men were in this way restored to all ranks of the police.

In addition to the ordinary and regular work of the force much attention has been required of them during the year in connection with the following:

(1) The continuation and winding up of the campaign for the suppression of vice and immorality in connection with the camp of soldiers of the National Army at Camp Las Casas.

(2) The enforcement of the laws prohibiting the sale of alcoholic beverages. The last-mentioned work has continued throughout the whole year and has presented many difficulties and problems, especially in connection with the illicit importation and also illicit manufacture of alcoholic beverages. The police have been very vigilant and efficient in the work of discovering these violations of the laws and prosecuting the offenders. The local law covering the latter is at present defective, but we hope for improvement through amendments to the Federal laws.

The entire police force was the same as the previous year—727 men, including officers and enlisted men of all ranks, as well as detectives and civilian employees. The total expenditures for the fiscal year were \$489,574.66. The total number of arrests during the year was 38,437, which was 5,519 under the figures for the previous year, a reduction of 12.5 per cent. But the decline in the number of arrests for crimes of violence and disorder, such as attempts to kill, assault and battery, and disturbance of the peace, there was a reduction of from 17 to 36 per cent in the number of arrests. This large reduction in crime the chief of police attributes to the effects of prohibition upon the people at large.

Complete statistics with reference to the work of the insular police will be found in Exhibit C, of Appendix I.

CIVIL SERVICE COMMISSION.

Owing to the readjustments due to the demobilization of troops and termination of many war activities, the civil service commission received 1,347 applications for examination, which is a considerable increase over the two preceding years. Of the total number of applications received, 1,218 persons were examined and 572, or 46.96 per cent, passed and were placed on the list of eligibles.

This commission examined also 231 persons for the United States Civil Service Commission. Of these 164 took examinations for appointment in Porto Rico and 67 for positions in the States.

During the period covered by this report, 211 appointments were made out of the list of eligibles. Due to abnormal conditions, the temporary appointments were very numerous. All efforts are being made to restore the service to its normal condition.

The number of nonnatives holding positions in the insular government is constantly decreasing, as will be seen from the following figures. Of the 5,953 positions in the government, only 208 are held by nonnatives, and out of this number 148 are teaching positions. In 1913 there were 769; in 1914, 429; in 1915, 378; in 1916, 323; in 1917, 327; and in 1918, 206. There are now 22 nonnatives in unclassified positions which are filled by appointment, and only 38 occupying positions in the classified service. This number will continue to decrease, because when these positions become vacant they will be filled from the lists of eligibles which contains names of natives only.

During the Spanish régime there was nothing resembling a civil service and no step in this direction was taken during the first years of American occupation, or until March 14, 1907, when a civil-service law was passed, to become effective on January 1, 1908. Several objectionable and compromising features appearing in the original act still subsist to such an extent that the amendments made subsequently to it do not cover the ground entirely. Although the commission has recommended many times the extension of the classified service to cover many more branches of the government, still, out of the 5,953 positions, only 1,400 are in the classified service.

The legislature enacted at the last session a law to protect employees who entered the military service, by keeping their names on the eligible list for a period of two years for positions similar to those held before relinquishing their connections with the insular government.

BOARD OF MEDICAL EXAMINERS.

During the month of October, 1918, this board held regular examinations. Four physicians were examined and, having passed the required test, were duly licensed to practice. Four minor surgeons were examined and disapproved; 1 midwife was examined and disapproved; 1 optometrist also failed; and of 13 nurses examined, only 8 passed successfully.

In April, 1919, six physicians who took the examinations were approved. Eighteen minor surgeons were examined, of whom nine only survived the test. Eighteen nurses were examined, with a like result—nine approved and nine disapproved.

During the period covered by this report two communications were received from two physicians who asked for licenses without examinations. These requests had to be denied, because the board can not issue licenses for the practice of medicine in the island to persons before they pass the regular board examinations.

BOARD OF PHARMACY.

On September 17, 1918, this board reexamined 2 candidates with success, and on the 18th they were given the license to practice pharmacy.

The board of pharmacy on January 28, 1919, examined 11 candidates, who proved themselves qualified in the various subjects of the profession.

On June 17, 1919, 12 candidates were examined. Of this number 7 were approved in three subjects; 2 were approved in four subjects; 1 in six subjects; and 1 in eight subjects of the profession.

BOARD OF DENTAL EXAMINERS.

During the course of this year 10 applicants for license to practice dentistry appeared before this board. Out of this number 8 candidates passed successfully the required examination and were licensed to practice their profession. Two were disapproved.

During the last months of the war this board examined and recommended several candidates who were commissioned as first lieutenants and detailed for service with the Porto Rican contingent at Camp Las Casas.

BOARD OF VETERINARY EXAMINERS.

During the fiscal year 1918-19 no candidates were examined by this board.

Until the passage of a law in 1916 the practice in this profession was free, and many people obtained diplomas by correspondence. At the present time there are 19 veterinarians practicing in the island. Of this number 4 are regular college graduates, while the other 15 obtained their diplomas by correspondence.

BOARD OF TRUSTEES OF THE UNIVERSITY OF PORTO RICO.

The University of Porto Rico, with its colleges of liberal arts, law, and pharmacy, and other institutions located at Rio Piedras, and its college of agriculture and mechanic arts located at Mayaguez, had its full share of troubles caused by the unusual events and conditions of the year under review. Nevertheless it added a year of creditable achievement to its history.

Both at Rio Piedras and at Mayaguez the S. A. T. C. was organized during the first semester in cooperation with the War Department, and very soon had to be demobilized because of the signing of the armistice, but in addition to this disturbing event, all of the institutions at Rio Piedras were closed for a time on account of the epidemic and the college at Mayaguez suffered very serious losses to its buildings and equipment as well as other difficulties caused by the earthquake. At both places, however, strenuous and successful efforts were made to overcome all these difficulties and make up the lost time.

The faculties and organization of the several colleges have been strengthened, but there is great need for additional buildings, both at Rio Piedras and Mayaguez.

BOARD OF TRUSTEES OF THE CARNEGIE LIBRARY.

Considerable progress has been made during the year in developing the circulating feature of this large library, especially the system of traveling libraries. The number of cases has been increased to 50

with from 50 to 100 books in each case. The parcels post is also being used as a means of developing the circulation of books. The total accessions of books during the year was 3,596, divided into Spanish, 2,232; English, 1,344; books of fiction, 2,176; and nonfiction, 1,282. The appropriation for the year was \$15,560.

INSULAR GOVERNMENT FINANCE.

As shown in the report of the treasurer, published elsewhere in this volume, the most important work in the department of finance was a general reform of the revenue system so as to provide additional revenues both for the insular and the municipal governments.

The need for additional revenue for the insular government had become very urgent. The income-tax law enacted in 1917 to provide revenues in substitution for those lost through prohibition was simply a temporary measure for only one year, and besides the revenue derived from it was insufficient. Due to the earthquake and epidemic, as already explained, an unexpected burden had fallen upon the treasury of more than \$1,000,000 to relieve the victims and repair the damages caused by these disasters. Moreover the new municipal law, already referred to, would allot to the municipalities a larger proportion of the general property tax than they had enjoyed hitherto, and the revenue of the insular government from this source would be reduced by about a half million dollars. The legislature therefore turned to the income tax as the source from which to derive additional revenue, and in order to unify all the income-tax laws in force in the island it was decided to repeal both the Federal income-tax law of 1916, amended in 1917, and also the insular law of 1917, and enact a new income-tax law in lieu of both measures which would yield sufficient revenue to meet the needs of the island treasury. This was carried out in act No. 80, approved June 26, 1919, which lowered the amount of the exemptions and increased both the normal tax and the surtaxes.

In addition to this, a new excise tax law was approved, which was in the main a codification of all the former excise tax laws, but increased the rate on certain specific articles.

As a result of this legislation the treasurer estimates the income of the insular treasury for the year 1919-20 at \$7,121,347, which is about \$1,100,000 more than the estimate for last year.

The available cash balance in the treasury on June 30, 1919, was \$838,385.93, which would be increased by revenues in transit to \$1,188,957.36, or by counting unpledged bonds to \$1,233,957.36.

It will be noticed also that the treasurer's estimates result in a considerable deficit in the financial operations of the government for the year 1919-20, but this has resulted in part from the extraordinary expenditures that will have to be made during this year, which were due to the disasters already mentioned. It is hoped that all these difficulties can be obviated by postponing certain appropriations until the following year, or until funds may become available. This course of action is specifically required by the organic act.

Summary of the transactions of the insular treasury for the fiscal year 1918-19.

Customs receipts during the year amounted to	\$355,000.00
Internal revenue receipts accruing to the insular government, made up of \$571,071.32 from excess over legal, municipal, and school board maxima; \$929,571.03 from United States internal revenues; \$257,327.12 from property taxes; \$802,123.80 from income taxes; \$42,564.68 from inheritance taxes; \$1,225,700.59 from tobacco tax; \$1,135,510.17 from tax on spirits and liquors and for other taxes aggregated	5,318,868.71-
Receipts from fees, fines, and other miscellaneous sources amounted to	892,505.59
Making the total actual revenue collected on account of the fiscal year 1918-19	6,211,374.30
There also reverted to and were paid into the treasury on account of general fund, representing repayment of loans to municipalities and school boards, repayment of unexpended funds to appropriations, sales refunds from the working capital account of the bureau of supplies, printing and transportation, and various other minor transfers, aggregating	1,686,094.37
Making the total insular treasury receipts on account of general funds available for expenditure under appropriations	7,897,468.67
Receipts on account of trust funds, representing \$2,523,600.10 in property taxes on account of municipalities and schools boards; \$609,008.84 from sale of public improvement bonds and irrigation bonds; \$45,650.71 from court fees and fines; \$23,780.89 from harbor and dock fees; \$2,269.90 from interest on bank deposits; \$434,351.01 in bond redemption tax; \$175,418.42 in property taxes paid under protest; and \$1,867,054.19 from miscellaneous sources and transfers, amounted to	5,681,134.06
Bringing the total receipts of the treasury for the year up to	13,578,602.73
This amount, added to the cash in the treasury at the close of 1917-18	4,461,448.43
Make the total to be accounted for	18,040,051.16
On account of appropriations by the legislative assembly there were expended during the fiscal year:	
For legislative expenses	\$89,163.60
For all services, public works, improvements, and expenses incurred by and effected through the various branches of the executive departments of the insular government	5,564,098.30
For the support of the judiciary	415,357.77
For miscellaneous purposes	130,907.87
Or a total of	6,199,527.54
Further disposition of available funds in loans to municipalities and school boards, transfers and repayments to appropriations, including repayable expenditures from the operation account of the bureau of supplies, printing, and transportation, and municipal and school board bonds redeemed, amounting to	1,568,095.51
Brought the total amount expended and disposed of up to	7,767,623.05
Reducing the amount at the disposal of the government to	10,272,428.11
Disposition of trust funds, represented by payments made from municipal and school board tax accounts amounting to \$2,617,072.69; expenditures from irrigation fund, \$531,385.57; other expenditures, repayments, and transfers, \$2,101,653.49; in all aggregating	5,250,111.75
Reduced the amount to the credit of the government at the end of the year in available resources to	5,022,316.36
Segregating from this amount representing funds held in trust for specific purposes	4,183,930.43
There remains available for expenditure under legislative appropriations	838,385.93

OUTSTANDING BONDED INDEBTEDNESS.

The total bonded indebtedness of the insular government was reduced during the year by \$251,000 as follows: Fifty thousand dollars paid on account of road loan of 1907; \$150,000 paid on account of irrigation loan of 1909; \$30,000 paid on account of refunding bonds of 1916; and \$21,000 paid on account of refunding bonds of 1915.

The total bonded indebtedness was increased during the year by \$617,000, as follows: Five hundred thousand dollars for the sale of public improvement bonds of 1918, and \$117,000 for the sale of irrigation bonds of 1918, thus making a total of bonded indebtedness at the end of the fiscal year of \$9,516,000.

The limit of indebtedness under the Jones Act on the basis of the present assessed valuation is somewhat in excess of \$17,780,000, so that the above amount of bonded indebtedness is still well within the limits.

The entire bonded indebtedness outstanding on June 30, 1919, was.....	\$9, 516, 000
Road bonds secured by special tax.....	\$825, 000
Irrigation bonds secured by special tax upon the lands irrigated.....	4, 917, 000
Bonds secured by the San Juan Harbor dues.....	600, 000
Bonds secured by collateral bonds of the municipalities and school boards.....	1, 174, 000
Total.....	7, 516, 000
Balance.....	2, 000, 000

Subtracting, therefore, from the total outstanding indebtedness all those forms of bonds for which the insular government holds collateral securities sufficient to insure their payment, as well as those bonds for which a special tax has been levied for their redemption, there remains a balance of only \$2,000,000 public improvement bonds for which the insular government is responsible and funds for the payment of which must be provided out of the general revenues.

MUNICIPALITIES.

By far the most important constructive work of a political nature attempted during the fiscal year was connected with the municipalities. As will be seen by reference to the annual reports and the messages to the legislature of the present governor, there has long been dissatisfaction with the form of government and methods of administration of the municipalities. This matter has, however, been so deeply immersed in partisan politics that it has heretofore seemed impossible for the legislature to summon courage to attack the problem. This year, however, both political parties united for the purpose and made a serious and courageous effort to reform the entire system of municipal government along original and somewhat daring lines, and yet sufficiently within experience elsewhere and knowledge of peculiar local conditions here as to make a hopeful experiment.

The importance of this can hardly be overestimated. Democratic self-government in the American view consists largely of local self-government. Dividing out the functions of government not only among a considerable number of States, but also among a far larger number of local units, such as counties, cities, townships, etc., each

with ample powers of local control over local affairs is undoubtedly the American ideal. In Porto Rico during Spanish times there was an extreme centralization of all control in the insular government. Since the American occupation many tentative measures have been suggested and some sporadic efforts made to effect some decentralization by creating local units with more or less local autonomy. The great difficulty has been that there is only one local unit of any sort in Porto Rico, namely, the municipality, and that includes not only a more or less important "pueblo" or urban zone, but also a considerable area of rural territory. The so-called school boards refer to the same unit; they are simply the municipalities specially organized for a special purpose. Hitherto the voters of each municipality have elected their municipal council and mayor for general municipal administration and school board for separate educational administration, but all of these officials have been so closely held to accountability by the officials of the insular government that there has been little opportunity to develop real local autonomy.

And yet it is unfair to say, as has frequently been said, that there has been no real development or improvement in local administration in the 20 years under the American flag. In 1899, the credit and financial conditions of the municipalities were so bad that the military governor, Gen. Davis, used in his report the following language: "Until municipal government is reformed and elevated to a very much higher plane than now, I see no hope of greatly improved social, domestic, or economic conditions." After 20 years this distrust has been practically removed, and at present all the municipalities close their annual financial operations with a cash surplus in their treasuries, where formerly only debts remained.

With these principles and facts in mind and instinctively recognizing the importance of the American idea of decentralization, the legislature worked out the new municipal law. It is radical and original to the point of daring. It abolishes practically all the present municipal institutions, the mayors, councils, and school boards, and substitutes a new body called the municipal assembly which is to be hereafter the chief center of all local government. This assembly is to be elected by the people, but it is to be bipartisan in character and is therefore somewhat larger in each municipality than the old municipal councils. The actual administration is to be carried on by a commission or council of from three to five members according to size of the city and this commission is selected by the municipal assembly and responsible to this body, which also makes the budget, levies the special taxes, and in general controls the local government. The law also reapportions the receipts from the general property tax granting the municipalities a larger share and abolishes much of the supervision hitherto exercised by the officials of the insular government, turning this over to the municipal assembly.

This new law will certainly give to the municipalities an opportunity to develop a larger and more complete local life and its enactment has been received with great interest on the part of the people and it is hoped that it will prove successful.

The work of the municipalities during the fiscal year has been generally satisfactory. The administration of their finances has been upon the whole creditable, and those most affected by the earthquake are struggling with the problem of reconstruction. Several

towns have arranged for loans and are preparing to provide for their people some of the most indispensable modern necessities of urban life. Of the 75 towns in the island, 37 now have water-works, and 8 of these have added sewerage systems.

EDUCATION.

As before stated the work of the department of education was grievously interrupted during the year by the earthquake and epidemic which together seriously affected the whole island from October 11 to the Christmas holidays. The continued effects of war work and the drain upon the personnel of the department caused by the military service also had serious effects upon the efficiency of the work of the schools. Nevertheless the work of education continued with interest and persistence and the results at the close of the year were surprising when all the circumstances are considered.

The total enrollment for the year was 160,794, an increase of about 18,000 over the previous year. Of these, 1,176 were enrolled in the University of Porto Rico, 97,995 in rural schools, 54,422 in elementary urban schools, 3,465 in secondary schools, and 2,592 in night schools. There were also enrolled 651 in the charitable and correctional schools, and in private schools 5,722.

The total number of children within the school ages (5 to 18 years) is estimated at 441,465, and the estimated number of rural school children based upon the census of 1910 would be about 350,000. The percentage of the school population therefore actually enrolled was for the whole island 36.4, and for the rural districts 28 per cent. These percentages, however, do not do justice to the situation in the rural territory. The Federal census classified as rural all the population except those living in cities of 2,500 people or more. Therefore many thousands of school children classified as rural are actually enrolled in urban schools.

The number of buildings used for schools was 1,724 of which 529 were owned by The People of Porto Rico, and 1,195 were rented. The number of teachers employed was 2,984, of whom all but 148 were native Porto Ricans. There were completed during the year 20 new school buildings, 6 of which were urban and 14 rural, and there are 24 more under construction. In addition 26 new sites were acquired upon which school buildings will be constructed as funds are secured. The total expenditures for school work were \$2,467,703.29. While all these figures show substantial progress, they also show how much still remains to be done in order to meet the urgent needs of the large school population.

Throughout the year the emphasis upon the rural school work was continued and intensified in every possible way. Ninety-six consolidated rural schools were maintained, which brought within reach of a large number of rural children a far better type of school than the ordinary rural school. General interest in the schools and in rural uplift was stimulated by more than 1,000 parents' associations whose thorough cooperation with the teachers produced good results.

In all the schools rural and urban alike, the so-called prevocational work was stressed as much as funds would permit. Home economics, manual arts, native industries, and especially agriculture were taught and emphasized in all the schools where the circumstances rendered it possible.

In general it may be stated that while only a beginning has been made in the tremendous task of educating the people of Porto Rico, nevertheless it is a good beginning. Much has been already accomplished, wide popular interest has been created in the education of the children, and an excellent foundation has been laid upon which to build an adequate modern school system for all the children of the island. The need now is for larger funds for every phase of educational work. The last legislature rose to the occasion and increased appropriations so that next year the expenditures from all local sources will reach about \$3,000,000. If Congress would supplement the local effort by a generous appropriation of Federal funds rapid progress could be made.

AGRICULTURE AND LABOR.

The story of the development of this department is briefly as follows:

Agriculture.—The United States Experiment Station at Mayaguez established in 1901, was the first organized technical institution in the island for the study and promotion of agriculture and has continued to this date with good results.

In 1911, the legislative assembly by act created a board of commissioners of agriculture to publish agricultural statistics and to look after the agricultural development of the island by all possible means.

In March, 1914, the legislative assembly authorized the acceptance by The People of Porto Rico of the Rio Piedras Experiment Station which had been organized and maintained by the Sugar Growers' Association and has been operated since at the expense of the insular treasury.

The organic act of March 2, 1917, created the department of agriculture and labor and the insular legislature in the same year organized and extended the various services connected with it, by making appropriations for expenses and personnel as well as by determining lines of procedure. The various laws enacted in the period between 1901 and 1917 could not very well be carried out for lack of proper machinery to enforce them.

Reports indicate that only 63,414 tons of sugar, 25,855 tons of coffee, and 3,128 tons of tobacco with an aggregate value of \$17,424,910 were produced here in 1897. The figures to-day show that 453,796 tons of sugar, valued at \$55,726,025; 18,809 tons of coffee, valued at \$5,505,316; and 8,598 tons of tobacco, with a value of \$8,982,130, were produced last year. The above figures speak for themselves of the progress made in agriculture in the three principal crops without counting the increase made in fruit production.

Labor.—In 1899 there was no legislation protecting the workingmen in Porto Rico.

From 1902, to date, the statute books have been filled with labor laws, the most important of which are: The employers' liability act; the law regulating hours of labor of railroad employees; the law establishing the eight-hour working day in public works; and others.

Reference to the report of agriculture and labor published elsewhere in this volume will furnish a complete list of the laws enacted for the benefit of the laboring classes of Porto Rico during the last 17 years.

Since the establishment of the bureau of labor in 1912 no legislature has failed to pass some piece of legislation for the protection and betterment of the laborers.

Following are some of the most important ones approved: In 1913, an act providing for the construction of scaffolds; and an act regulating the work of women and children; in 1915, an act providing for the sale to laborers of certain lands of The People of Porto Rico; in 1916, an act providing for the relief of workmen; in 1917, an act determining duties of employers in case of strikes, and an act to issue bonds for construction of houses to be sold to laborers; and in 1919, an act fixing minimum wages for women, a law on labor contracts, and others too numerous to mention here.

Throughout the fiscal year 1918-19 due to war conditions which took the technical men from the service, the department of agriculture had to struggle along with many difficulties. The inspectors and subinspectors of this bureau have attended to the propagation of agricultural methods and to the rural organization. They have also cooperated with the experiment station in the examination of fertilizers, and at the same time have conducted investigations in connection with tractors, dipping vats, elephant grass, and vanilla and sisal hemp. These inspectors have visited 1,576 properties and have taken samples of diseased plants as well as specimens of poisonous insects. Also 60 lectures were given.

The activities of the experiment station have been conducted along the lines of exploration and research. The division of entomology has looked after the enforcement of the plant quarantine act to prevent the introduction of pests and insects injurious to agriculture while the division of chemistry has worked in the enforcement of the law of fertilizers, having analyzed 127 samples of mixed fertilizers and a number of guanos and soils. The division of agronomy has devoted most of its time to harvesting the cane plantings, in preparing land, and making new plantings. A good part of the time has been given to the study of the yellow stripe or sugar cane mosaic disease. Recommendations have been sent out to every place where this disease was known to exist as to the means of eradicating it. It is very difficult to stamp it out entirely but if active and intelligent measures are taken the same can be controlled.

Division of forestry.—Following the passage of a law in 1917, the governor issued a proclamation setting aside 15,000 acres of mangrove swamp lands as an insular forest. Two tracts of 5,000 acres each on the south coast have been examined for the same purpose. This work is highly important because the forests of Porto Rico have disappeared and their need is greatly felt. The work has begun and the plans are being prepared for its continuous development.

The bureau of labor has conducted its work with interest. The inspectors have visited the country to secure compliance with the school laws and those regulating the work of women and children. Construction works have been visited and laborers have been personally questioned. Living conditions have also been investigated.

The employment agency under this bureau has encountered many difficulties this past year but still its results have been satisfactory.

The economic and social condition of farm laborers has also been the subject of diligent attention of this bureau. Conditions have been found to exist like those reported six years ago. Illiteracy accounts for it. They live without ambition.

During the period covered by this report the bureau inspectors intervened in 22 strikes, involving about 14,194 strikers. Wages generally were increased during the year though perhaps not as much as the cost of living for the laborers. Several important labor laws were enacted, which have been mentioned elsewhere.

AUDITING AND ACCOUNTING.

There have been no material changes in the system of auditing and accounting which has been in use for several years past and has continued to give satisfaction during the past year.

Much attention was given during the year to the preparation of regulations to secure standardized methods of accounting for the municipalities and school boards, but this work was suspended toward the close of the year because of the passage of the new municipal law, which will make radical changes in the methods of administration of the local units. When this law becomes effective, this work will be taken up again, because under its provisions the auditor's office will have important duties to perform in connection with the financial administration of all the municipalities.

The report of the auditor, with all necessary tables and exhibits, will be found in Appendix IV.

PUBLIC WORKS—ROADS AND BUILDINGS.

ROADS AND BRIDGES.

The past year was one of great activity in the important division of public works. In addition to the regular work of maintenance of roads, bridges, and buildings, the division was actively engaged in the construction of the new roads and bridges provided for through the \$2,000,000 road-bond fund, \$500,000 of which was issued during the year. There were completed during the year 41.3 kilometers of new roads and 15 new bridges, with an aggregate length of 448 lineal meters.

The total expenditures for the maintenance, repair, and construction of insular roads and bridges during the year was \$1,167,601. Of this amount, \$647,575 was for maintenance and repair, and \$520,026 for surveys and construction of new roads and bridges.

Many important new roads are now under construction, and the last legislature authorized a third \$1,000,000 worth of bonds to be issued for this road building program as soon as the funds from the \$2,000,000 bond issue shall have been exhausted. This road-building program will be pushed as rapidly as circumstances will permit, and all the work done will be of a substantial and permanent character. When completed, the road system of the island will be greatly extended, and will constitute, as indeed it does now, one of the most impressive features of this beautiful island. .

BUILDINGS.

The work of this branch of the division was greatly increased by the earthquake. Construction has been much delayed by the high cost of materials and the expectation that this cost would fall at the coming of peace.

During the year about \$200,000 has been expended upon new buildings by administration and about an equal sum by contract. Many projects have been prepared for new buildings to be erected by the municipalities and school boards, which are estimated to reach an aggregate cost of about \$666,000. In addition, other projects are being prepared, which are estimated to cost in the aggregate approximately \$631,000. There was expended for the maintenance and repairs of public buildings of the insular government \$69,528.

PUBLIC LANDS.

The survey of lands belonging to the insular government was continued slowly during the past year, 2,450 acres being surveyed and marked with permanent monuments. In order to make these surveys with accuracy some of the adjoining private lands had also to be surveyed.

The public lands which have been surveyed are usually leased to private parties; and the work of leasing them is also in charge of this division. The annual rent derived from all the public lands leased to private parties for use in agriculture up to the close of the last fiscal year is now \$20,264.96. It is estimated that about 75,000 acres of public lands have never yet been surveyed, much of which if once surveyed might be profitably leased to private individuals, and considerable income derived therefrom. It is recommended that appropriations be increased, so as to push this work to rapid completion.

INSULAR TELEGRAPH.

This branch of the service during the year under review went through the most active and trying 12 months of its existence. The earthquake caused great damage both to its lines and offices, and, moreover, this disaster, together with the epidemic which followed it, threw upon the service an enormous increase of business at the precise moment when it was most difficult to handle it. The high cost of all the materials used in telegraph construction and operation also impeded the work of repair and extension.

When the year closed, however, it was shown that the bureau had not only repaired all of the damages and handled successfully its large business, but had made important improvements and extensions for the betterment of the service.

The total cash receipts were \$109,591.26, an increase of \$12,765.28 over those of the previous year, while the net profit after deducting all expenses, was \$9,314.61. The total number of messages transmitted was 349,918, or more than 80,000 in excess of the figures for the previous year. There were at the close of the year 16 telegraph lines and 18 telephone lines, with 2,173.7 kilometers of wire. A full and detailed account of all the operations of this bureau will be found elsewhere in this report.

HARBORS AND DOCKS.

The war demand for shipping during the year reduced the number of vessels arriving at various ports of the island to the lowest point in 10 years. The total number of ships decreased 15.7 per cent

and the tonnage 17.4 per cent under the figures for the previous year.

The total income from the harbors was correspondingly reduced, falling 7.8 per cent under the low figures of the previous year. The greatest decrease was in the smaller ports, the collections at San Juan being about the same as those of the year before. The total receipts from all the harbors was \$42,791.77, more than half of which, namely, \$23,780.89, was collected at San Juan.

No improvements were made in any of the harbors except at San Juan, where the extension of the bulkhead and marginal street for a distance of 342 feet has been practically completed at a total cost of about \$60,000. This leaves a balance in the construction fund of about \$40,000.

The total receipts of the San Juan Harbor Board for the year 1918-19 from operation were \$60,404.61, total expenditures \$14,904.53, leaving a balance on operating account of \$45,500, which was transferred to the sinking fund for payment of the harbor bonds. This fund now amounts to \$111,782.86.

IRRIGATION DISTRICT.

The irrigation service has been in successful operation for five years, and the year under review was perhaps the most successful of them all. The weather conditions were very favorable and the rainfall unusually heavy. The full standard of 4 acre-feet was delivered to nearly all the lands in the district, and in addition, 2,130 acre-feet was offered to certain lands to make up for the shortage of the previous year.

The hydroelectric system of the Carite water-power station has been in practically continuous operation during the whole year. The total income for the year from the sale of power was \$97,661.92, and when power is delivered to all contracts the annual income will be approximately \$144,000. The two improvements in the irrigation service already provided for by a special sale of \$200,000 worth of irrigation bonds have not yet been undertaken. Subscriptions for \$173,000 of these bonds have been received from the planters of the district and \$117,000 worth have actually been delivered. The work of doubling the capacity of the Carite hydroelectric plant as well as that of increasing the storage capacity of the Patillas Reservoir will be commenced in the near future.

The irrigation system has proved a great success and has been the salvation of the sugar planters in the district which it serves. Two of the driest years in the history of the island have occurred since its inauguration, and most of the planters on the south side of the island would have been financially ruined if they could not have had the benefit of the waters stored in the big public reservoirs.

This demonstrated success has caused great public interest in the study of new projects for the extension of public irrigation to other sections of the island which also suffer from frequent and destructive droughts. One of these projects, called the Isabela project, for irrigating the dry lands in the northwestern corner of the island, was adopted by the legislature at its last session. It involves the construction of a large reservoir on the Guajataca River to irrigate about 15,000 acres of excellent lands in the municipalities of Isabela and

Aguadilla. Bonds have been authorized to an amount of \$3,000,000 to cover the entire cost of this project.

JUSTICE.

The outstanding features in the work of the department of justice for the year were the final conclusion of the campaign for the suppression of conditions of vice and prostitution in connection with the mobilization of the Porto Rican contingent of the National Army and the enforcement of the prohibition against alcoholic beverages. The first of these important matters was begun in the previous year and was discussed in the last annual report. It was carried forward however in the first half of the year covered by this report or until the demobilization of Camp Las Casas and was completely successful in its main object.

The enforcement of prohibition in Porto Rico, as elsewhere, has been attended with many difficulties and has caused much labor and anxiety both to the insular police and the department of justice. The local enforcement law is defective in its procedure, and violations of prohibition have been carried out through illicit distilling of alcohol, illicit importations of alcoholic beverages, and the manufacture and sale for beverage purposes of "alcoholados" or alcoholic compounds for alleged industrial uses. It is hoped that, inasmuch as the prohibitory laws are both local and national, concurrent jurisdiction may be unmistakably conferred upon both national and local courts and thorough team work may be secured in their rigid enforcement on the part of all the courts and officers of justice throughout the whole island.

It is too soon as yet to form a just estimate as to the general effect of prohibition in accomplishing the purposes for which it was established. One thing, however, seems clear, that in the year and four months that have elapsed since it became effective there has been a steady and continuous decrease in the number of criminal cases in all the courts and in all kinds of crime. This is especially true of crimes of violence such as homicides, assault and battery, and disturbance of the peace.

The department of justice has also been busy with much important litigation in which The People of Porto Rico was an interested party both in the insular and the national courts of appeal. A large majority of these cases were finally decided in favor of the insular government.

PENAL INSTITUTIONS AND REFORM SCHOOL.

The policies pursued for the past two years in the general management of these institutions have been successfully followed during the year under review. The policy of segregation and confinement of a certain class of delinquent and diseased women for the protection of the soldiers of Camp Las Casas made necessary many temporary modifications in the management of the penal institutions. These were attended by some difficulties that were increased by the damage and destruction caused by the earthquake, but everything necessary was finally done and the success of the policy demonstrated.

The labor of a large number of the prisoners in the penitentiary and jails was utilized as heretofore on the public roads to good advantage both to the prisoners and the Government. The reform school located at Mayaguez has, for the past two years, been undergoing modifications as to purpose, management, and character of inmates due to the enactment of the juvenile court law and the plan of using this school as an instrument in the hands of the judges for carrying out this law. The capacity of the school has therefore been increased and many of the older inmates released upon conditional pardons, so that the school could fulfill more completely its original purpose, namely, that of a school of reform for young delinquents rather than a jail for minor offenders.

FRANCHISES.

Twelve franchises enacted by the public service commission and approved by the governor during the fiscal year 1918-19 are enumerated in Exhibit D of Appendix I herewith.

Two of the ordinances passed were for the granting of authority to take water from the various streams of the island for generation of electrical energy; two for the taking of water for irrigation purposes; one for the taking of water for industrial purposes; one for the establishment of an aerial transportation service for passengers and freight around the island; and one for the operation of a water-works system.

PERSONNEL.

The following changes in official positions filled by presidential appointment took place:

Appointments.—J. W. Bonner, auditor of Porto Rico, March 3, 1919.

In accordance with existing laws, the governor during the fiscal year made the following executive appointments:

Judges of district courts, 1; fiscals of supreme and district courts, 8; secretaries of supreme and district courts, 1; marshals of district courts, 5; judges of municipal courts, 20; secretaries of municipal courts, 7; marshals of municipal courts, 7; justices of the peace, 14; registrars of property, 5; district chiefs of police, 24.

A number of appointments were also made upon various boards and commissions, as provided by the laws under which they were organized, and the gentlemen who have accepted such appointments are entitled to an acknowledgment of the personal appreciation of the undersigned and an expression of the gratitude of the people of Porto Rico for the generous gift of their time and service to the public in attending to the duties imposed upon them thereby.

Exhibit B to Appendix I of this report gives in detail a list of the appointments made by the governor during the past year.

WORKMEN'S RELIEF COMMISSION.

Legislation covering industrial accidents is of recent enactment in America and the progress attained in this direction in Porto Rico has all been accomplished since the American occupation and especially in the last few years. Although the Spanish civil statutes contained provisions intended to protect laborers against accidents in

industrial pursuits, in practice its efficacy was void, because the machinery employed in its operation was so complex that no practical results could be obtained.

In 1902 the legislative assembly of Porto Rico passed an employers' liability act, which in practice made null the right of workmen to relief from injuries sustained in dangerous occupations.

Later on, during the years 1913, 1914, and 1915, several bills were considered, but all failed of passage.

In 1916 the workmen's relief act was passed creating the workmen's relief commission of Porto Rico. Subsequent amendments were made to the original law to meet new demands by the legislatures of 1917, 1918, and 1919.

The law in force until June 30, 1918, was optional. This feature of the law gave rise to legal questions, which were presented to the courts in two test cases, and as a result of the decisions rendered, the legislature of Porto Rico amended the law in some respects and made it compulsory. This new feature was not recognized by the New York & Porto Rico Steamship Co., and an injunction was instituted against the treasurer of Porto Rico by this company to prevent the collection of the premiums fixed by the commission. The United States District Court of Porto Rico passed upon the case and sustained the contention of the company. The attorney general of Porto Rico then appealed the case to the Circuit Court of Appeals at Boston and this court in rendering its decision reversed the decision of the United States District Court for Porto Rico and established clearly the fact that the workmen's relief act of Porto Rico is compulsory for all employers.

The American Railroad Co. of Porto Rico and the Porto Rico Railway, Light & Power Co. have both refused to recognize the terms of the act on the ground that they are already under the jurisdiction of the Federal employers' liability act. There is in court at the present moment a test case to settle this new phase of the matter, and when the decision upon it is rendered all points in controversy will be made clear.

The work of this commission has been constantly increasing as will be seen from the following figures: On June 30, 1918, there were 196 employers with 10,580 workmen insured, while on June 30, 1919, the number of employers registered was 642 and that of workmen about 30,000. The number of applications for indemnity received in 1918-19 were 2,124 as against 603 the year before.

The total premiums assessed for the year 1918-19 amounted to \$138,935.26, of which \$120,399.42 were premiums and surcharges collected and \$18,535.84 were pending collection. During the same period compensations amounting to \$58,594.60 were paid, \$83,474.33 were estimated as pending, and \$14,449.35 were expended for administration, making the liabilities amount to \$156,518.28. Surplus of premiums refunded to employers were \$101.25, making the general expenditures of the commission aggregate the sum of \$156,619.53.

The total receipts during the fiscal year 1918-19 aggregated the sum of \$120,435.02; \$120,399.42 from premiums collected and \$35.60 from miscellaneous collections. The total disbursements were \$73,698.45, distributed as follows: Payments from general fund \$58,594.60; from the insular appropriation \$553.25; administration expenditures \$14,449.35, and surplus of premiums refunded \$101.25.

The net deficit of this year was \$8,131.98. During the three years of operation the total receipts have amounted to \$223,681.70 and the disbursements to \$163,573.46, showing a balance on hand on June 30, 1919, of \$60,108.24, because all claims presented to the commission had not been settled on June 30, 1919. The net deficit for the fiscal years 1916-17, 1917-18, and 1918-19 is estimated at \$24,116.12.

The 2,124 claims presented to the commission during the fiscal year 1918-19 were classified as follows: Partial incapacities 2,053, partial permanent incapacities 53, total permanent incapacities 2, and death cases 16. Of the total number of cases submitted during the year 1,385 were settled or partially settled, 664 were pending, 43 were filed and 32 were denied. At the beginning of the year 1918-19 the commission had two claims pending from the year 1916-17 and 93 from the year 1917-18, making a grand total of 1,480 claims settled in the fiscal year 1918-19.

The recommendation is made for the adoption of a law of security and safety in the industrial plants of the island in view of the growing number of accidents.

PUBLIC SERVICE COMMISSION.

Before the establishment of American Government in Porto Rico the granting of franchises was in the hands of the governor general of the island and the minister of colonies of Spain, dependent upon the nature of the grant. The laws under which concessions were made were various; the law of railroads of January 10, 1888, the law of waters of June 30, 1879, made applicable to Porto Rico by royal order of February 5, 1886, and the law of mines of July 6, 1859, amended on March 4, 1868.

Grants of concessions for the construction and operation of railroads were made by the minister of colonies. In cases of railroads laid over public highways the plans required the approval of the minister of colonies, while in railways over municipal roads or streets the approval of the governor general was necessary.

Some concessions made by the Spanish Government were accepted by the military government. The most important ones are the concession of the Compañía de los Ferrocarriles de Puerto Rico, that of the Línea Ferrea del Oeste for a railroad between Cataño and Bayamón, and those for telephone exchanges at San Juan, Ponce, and Mayaguez.

An order of the President of the United States forbade the grants of franchises during the period of the military government, without the approval of the Secretary of War. Many applications filed with the military government were dismissed until the Secretary of War ruled that the prohibition did not prevent the granting of temporary permits, and under this decision several permits were granted. One of these was granted to the San Juan Rio Piedras Railroad for the change of the motive power from steam to electricity.

Section 32 of the Foraker Act of April 2, 1900, conferred the power of granting franchises upon the executive council, subject to the approval of the governor.

On March 12, 1903, the legislative assembly of Porto Rico by law conferred upon the commissioner of interior all powers conferred by the law of waters upon the governor general, while the powers and

duties belonging to the minister of colonies were given to the executive council.

Three acts were passed by the legislative assembly of Porto Rico; that of February 25, 1907, relating to common carriers; the act of March 2, 1908, regulating public service corporations; and that of March 9, 1911, regulating common carriers by rail and granting certain powers to the executive council. This last act was amended by act No. 12, of 1916.

On March 2, 1917, Congress, in the new organic act for Porto Rico, created a public service commission with powers to grant franchises, rights, privileges, and concessions, and the legislature of Porto Rico on December 6, 1917, passed an act defining public service companies and regulating, defining, and limiting their rights, powers, and duties and the powers and duties of the commission and its officers, as well as the practices and procedure to be followed.

The commission, from its organization on October 4, 1917, to the close of the last fiscal year, has granted 36 franchises and revocable permits for railroads, electric plants, ferries, water-works systems, water rights for industrial and irrigation purposes and lighterage service. A franchise for the establishment of an aerial service was also granted.

Two important cases which had been taken to the court were decided by the Circuit Court of Appeals of Boston. The first one was originated against the American Railroad Co. for her increase of 20 per cent over the approved tariffs of the rates on sugar and its products without the consent of the executive council of Porto Rico. All amounts collected by the company have been repaid to the sugar producers by virtue of the decision in the above case, which was adverse to the railroad company.

The other case was that of the cable company, which was carried to the court by the cable companies when the commission temporarily reduced by 40 per cent their rates on all messages. The case was appealed from the insular courts to the Federal Court of Appeals at Boston, where it was decided that the public service commission had no jurisdiction over interpossessional and foreign instruments of commerce. Although the case was lost by the commission, some good was derived from it because the cable companies voluntarily reduced their rates by 20 per cent on commercial messages between Porto Rico and the United States.

During the year ending June 30 the commission held 54 regular meetings and 33 public hearings. The number of cases filed were 305, distributed as follows: Miscellaneous matters, 111; franchises, 62; formal complaints, 24; applications for certificates of necessity, 108. The cases disposed of were 199, and those pending 106.

It is very gratifying to note the increased number of applications for hydroelectric plants which shows that people are realizing the advantages that can be derived from the use of water power and also because utilizing properly the idle hydraulic power of the island Porto Rico can improve the general conditions for a good industrial development which is essential to progress.

Out of the amount of \$16,520 appropriated for the commission, \$12,925.46 have been expended, thus enabling the commission to close its year's work with a saving of \$3,594.54.

Two general recommendations are made: First, a technical survey to determine the amount of water available and susceptible of use for commercial purposes; and, second, the creation of a service of inspection and regulation of water concessions.

FOOD COMMISSION.

This commission made a full and complete report of its successful activities up to June 30, 1918, which was published in the annual report of the governor. Immediately upon the signing of the armistice on November 11, 1918, it relaxed its enforcement and regulation, retaining only a certain control of a few articles of food. On May 5, 1919, the date of the second anniversary of its existence, the last of its restrictive measures were repealed.

The final report of this very excellent commission, published in this volume, gives a brief account of its final measures of regulation and of the methods used in closing its useful activities. An indubitable though mournful proof of the great value of their services has been found in the mounting prices of foodstuffs which have followed the close of their work. All of the members of this fine commission served their island and their country for the whole two years of war with indefatigable energy and great skill, and without any compensation whatever. For this great and patriotic service they deserve the thanks of their island and their country.

TWENTY YEARS' PROGRESS.

On April 11, 1899, just 20 years ago, by the ratification of the treaty of Paris between the United States and Spain, Porto Rico became definitely American territory, and the responsibility for the government and progress of the island became definitely ours. In the 20 years that have elapsed the changes that have been made are so many and so important, and the progress in every line of human improvement and achievement has been so remarkable, that it may be worth while to make a brief survey in retrospect of what has been accomplished. It is especially necessary to make a survey of this sort at certain wide intervals of time, because in a matter like the general progress of a whole people the field of operations is so wide and varied, and the changes in living conditions are so numerous and gradual that even those most affected by them are likely to forget the past and fail to estimate properly the importance of the progress achieved under their own eyes.

With these considerations in mind, inasmuch as the fiscal year covered by this report closes the first 20-year period of the American administration, I have deemed it proper to present a brief summary of what may be truthfully characterized as

"20 YEARS OF PROGRESS IN PORTO RICO, 1899-1919."

When the Americans came to Porto Rico in 1899 they found an old and thickly settled country with a language and a civilization of high grade but quite different from their own. Although it was at the very end of the nineteenth century the people were living with very limited communications with the outside world and under a political, economic, social, and industrial system which was very much

behind the times. The great changes and developments of the nineteenth century—the century of democracy, of science, and material progress—had produced comparatively little effect upon the island. The problem was to lift a people who were under very backward conditions as rapidly as possible into touch with the twentieth century. So many changes had to be made at once that it was difficult to choose where to begin.

But as we look back over the 20 years it is plainly seen that almost every sphere of human life and work has been almost completely metamorphosed. Even in the department of justice and the field of jurisprudence where changes are usually slowest for obvious reasons, the modifications of the old Spanish system have been so great as to amount to almost a complete metamorphosis. The laws and the procedure of the courts of Porto Rico have become so closely modeled after the American system that remarkably few of the old Spanish practices are left unchanged. The Porto Rican lawyers and people have been so quick to learn and adopt the best features of American law and procedure that the changes in 20 years have been simply remarkable. They have organized and are now administering practically an American system of justice. This includes the jury, the grand jury, the writ of habeas corpus, injunctions, mandamus, quo warranto, codes of evidence, of criminal procedure, and of civil procedure, as well as the American political code and the penal code.

Practically the only laws of Spanish origin remaining in full force in Porto Rico are the civil code and the mortgage law.

There has been accomplished therefore in 20 years what seemed to the first American governors of the island absolutely hopeless even in a much longer period.

The general result of this development is a composite system of jurisprudence with a preponderance of American elements upon a background of Spanish civil law, all thoroughly worked together and coordinated by numerous important decisions of the supreme court of Porto Rico, a tribunal consisting of two American and three Porto Rican judges.

This work has already attracted the serious attention of some of the South American Republics and seems likely to exercise an important influence upon the juridical development of Latin America.

In several of the other departments there have taken place changes and developments in this period that are still more pronounced, or at least more impressive to the casual observer.

In the important department of education the conditions of the present when compared with those of 20 years ago are most gratifying, although when compared with what is to be desired are still depressing. In the last two decades there has been created in Porto Rico a modern, democratic school system offering free education to the children of the island and providing at public expense teachers, buildings, equipment, books, etc., and although this system of public education is not yet adequate to the great needs, it constitutes as it stands such an immense advance over what existed at the earlier date that the comparison is instructive and inspiring.

The following table gives comparative statistics bearing on some important points of school work and progress during the two decades:

TWO DECADES OF EDUCATIONAL PROGRESS IN PORTO RICO.

Comparative data.

	1898-99	1918-19	Increase.
Population.....	953,243	1,263,474	310,231
Of school age.....	322,393	434,381	111,988
Attending school.....	121,873	160,794	138,921
Of school age not in school.....	300,520	273,587	26,933
Teachers.....	525	2,984	2,459
District supervisors.....	16	41	25
Rural barrios without schools.....	426	20	406
Public school buildings.....		529	529
School expenditures.....	\$288,098	\$2,467,703	\$2,179,605
For elementary schools.....	274,203	2,077,903	1,803,700
For high schools.....		128,306	128,306
For university.....		162,232	162,232
Expenditure per inhabitant.....	.30	1.94	1.64

	1899	1910	1919
Percentage of adult illiteracy.....	79.9	66.5	54

1 One report gives enrollment as 29,182.

2 Decrease.

3 Estimate.

A mere glance at this table serves to show the immense advance that has been made and the striking results that have been achieved in every phase of educational work. The number of schools, of children attending school, of school buildings, of teachers and of expenditures for school purposes have all been multiplied tremendously.

The number of rural barrios that had no school at all, which must have been in the earlier period an immense majority of them, has been practically abolished and the overwhelming illiteracy of about 80 per cent of the adult inhabitants has been reduced to probably less than 60. Above all, the variety and character of the education, the spirit and quality of the work done in the schools have been broadened, modernized, and liberalized in accordance with the standards and ideals of the twentieth century.

If we turn to the great department of the interior, we shall find the most impressive evidence of rapid achievement in the matter of public works. As to roads, we started in 1899 with 267.4 kilometers of completed insular roads, 1 kilometer for every 3,565 people living in the island at that time. Now we have 1,189.4 kilometers of completed roads, or 1 kilometer for every 1,062 inhabitants. In the 20 years prior to 1899, there were built in Porto Rico 9 kilometers per year. In the past 20 years there have been built 922 kilometers, or an average of 46 kilometers per year.

And this same acceleration of progress can be seen in every other detail connected with communications, both internal and external, railroads, trolley lines, telegraph and telephone lines, the cables that land on our shores, the ships that visit our harbors. The ox carts and coaches of the earlier day have been replaced by trucks and automobiles. In public buildings the showing is equally astonishing.

Our 529 public school buildings alone, all built in the last 20 years, have cost the great sum of \$2,718,245. If we add to this the cost of other insular and municipal buildings we find the public building investment to be \$4,218,404 in 20 years.

Perhaps we can crystallize the value of a good administration of government by giving one simple set of figures. In the 20 years under American administration a public debt has been created, which at present is a little more than \$10,000,000. On the other hand permanent public improvements have been built which are of lasting benefit to all the people, both for the present and for the future, as follows:

Public debt.....	\$10,056,000
Roads and bridges.....	6,490,982
Public buildings.....	4,218,404
Irrigation system.....	4,917,000
	<hr/> 15,626,386

Only three great items of public works are included in this statement and for them only the cost of construction—not a dollar for maintenance. Minor items, such as the insular telegraph and others, are not included. The cost of the municipal waterworks, sewers, and lighting systems are not included, though much of the municipal indebtedness is included in the public debt. The table shows, however, that for every dollar of public debt created in the last 20 years this island has more than one dollar and a half invested in permanent public improvements. In the face of a statement like this there is no room for charges of graft or waste or extravagance.

To be sure, the surplus \$5,000,000 had to be invested out of the annual revenues, but a tax system has been created and efficiently administered in order to produce these revenues.

Many larger countries not a thousand miles away have four times the public debt and not half as much to show for the money.

The department of health makes quite as fine a showing, though it may not be so clearly set forth in figures. The whole health service has been organized and built up. The modern methods and agencies of guarding the public health have been introduced, such as quarantine, hospitals, scientific study of the causes, symptoms, treatment, and prevention of disease and the whole medical profession mobilized so as to cooperate in safeguarding the health of the people. Some dreadful diseases such as yellow fever and perhaps small pox have apparently been permanently banished from the island and many others seem to have been brought under definite control.

The death rate has been reduced so that last year, if we set aside the 10,888 victims due to the great epidemic and its complications, it was only 23.1 per thousand.

In the financial department of the government by reference to the reports of the treasurer and the auditor it will be found that similar advances and improvements have been made over the methods employed in the earlier period. A modern and just system of taxation has been created and efficient methods of assessment and collection of the taxes worked out whereby the burden of supporting the government is fairly distributed amongst all the people in proportion to their ability and in proportion to the benefits derived from the operations of the government.

In carrying out this just and fair principle, taxes upon property and incomes have very largely supplanted the old system of taxes which were imposed chiefly upon expenditures and most of which ultimately were paid by the consumers and the people at large without regard to their ability. There has also been worked out through the auditor's office an efficient system of auditing and controlling all expenditures and of checking accounts and safeguarding all the funds of the government, so that the money collected by taxation shall be properly expended in accordance with the appropriations made by the legislature.

The whole success of any administration of government depends upon the efficiency of these financial arrangements, and without them all progress would have been impossible. In these financial departments, therefore, lies the key to the success of the recent administration of public affairs of Porto Rico. A just and equitable system of taxation fairly and justly administered, together with strict accountability for every expenditure of public funds, constitute the keystone to the arch of good government in any country. And this has been provided and developed here in Porto Rico these last 20 years.

All the other departments of the government show similar evidences of progress and achievement. The new department of agriculture and labor, although it has been in existence only a little more than two years, has perfected its organization and done much to improve conditions in its immediate field. Taking over the work of the previous boards and bureaus and counting up all the improvements of the whole 20-year period, great progress has been made in both branches of this important department. Agriculture has been improved in its methods, greatly diversified in its products, especially along the line of foodstuffs, and the total productions of the farms immensely increased. Since 1901, the earliest date for which we have figures, the exports of agricultural products have been multiplied 10 times. On the labor side of this department the legal position of the workers has been metamorphosed since 1899, and the laborers of Porto Rico are now as free to meet and discuss their grievances, to organize and to strike for better conditions, as in any country. The statute books of Porto Rico are strewn with helpful labor laws, including a good workmen's compensation law and a minimum wage law for women. Wages have been increased and the conditions of labor much improved, though owing to the enormous population and other peculiar local difficulties, these improvements are not as great as they ought to be and will be in the future.

The police force has kept abreast of the rapid progress if indeed it has not led the vanguard. It is drawn from amongst the people themselves and is composed practically entirely of men born and reared on the island. Yet, it is free from graft and politics, obedient to discipline, effective in service, and entirely subject to the law. In appearance, honesty, and efficiency it will bear comparison as a whole with the police force of any country; and when contrasted with that of the earlier period, the change is perhaps more striking than that of any other governmental agency. But the same gratifying story is revealed in every other branch of government activity.

In the office of the executive secretary, in the more or less independent bureaus, such as the bureau of weights and measures, and printing, transportation, and supplies, in the many commissions and boards, such as the harbor board and the insular board of health, etc., there is found the same record of work and of inspiring contrast with the earlier period.

The courts of the island also, from the Supreme Court of Porto Rico down to the humble justices of the peace courts, are performing truly important judicial work with skill and efficiency. A reference to the various appendixes published elsewhere in this volume will make all this clear, both as to the work of the present and as to the progress made in the 20 years.

Turning now from the insular government to the municipalities, we see that these local units have also made great progress in the administration of their local affairs. This is especially true of their financial administration, though this is sometimes denied by those who have not examined the facts. In 1899, immediately after the change of sovereignty, the credit of the municipalities was so bad that the military governor, Gen. George W. Davis, made the following statement in his report on civil affairs for that year:

Until municipal government and administration is reformed and elevated to a very much higher plane than now, I see no hope of greatly improved social, domestic, or economic conditions.

The progress made by the municipalities during the 20 years has completely destroyed the distrust expressed in this rather pessimistic statement. The large floating municipal debt, which in 1901 amounted to \$501,128, has completely disappeared, and now all the municipalities close their financial operations each year with cash surpluses on hand, while during the earlier period only debts remained. In further proof of this progress we may mention the extraordinary development of public-service enterprises that have been built, nearly all of them, during this period. In the 75 municipalities there are now 37 water systems, 8 sewers, 21 markets, 77 slaughterhouses, and 52 hospitals.

If we leave aside all forms of governmental work and glance for a moment at the general life of the people, we shall see even greater evidences of progress during these 20 eventful years. Commerce and business have been metamorphosed and immensely increased, social and domestic life greatly changed, and the moral standards much elevated. Many of the worst vices, such as gambling and the use of alcoholic beverages, which in the earlier period were openly practiced and recognized by the law, have now been prohibited by statutes enacted by the representatives of the people.

And while all of these laws can not yet be completely enforced, as indeed they are not completely enforced anywhere, nevertheless they have the support of the courts and of the people at large. The immense increase in industrial business can in part be indicated by the increase in foreign trade, which has risen from \$17,502,103 in 1901 to \$141,896,400 in 1919. The change both in the volume and in the methods of business can also be shown in the number of business corporations registered in the office of the executive secretary. In 1899 there were thus registered only 14 corporations, 6 of which were banks. In 1919, there were registered 236 domestic corporations and 150

foreign corporations, 16 of which were banks. In everything that enters into or indicates the life of a people there is to be seen this marvelous change and progress. In the architecture of their homes and hotels, in the number and character of the crowded shops and stores, in the traffic that throngs the busy streets and fine roads, in the voluntary organizations formed for pleasure and for social welfare, and especially in the number and quality of the newspapers that make up the press—in fact, in everything one sees, there is written the record and the proof of 20 years of most remarkable progress.

Finally, just a word may be permitted on the much-discussed feature of political progress. If we put aside the brief period of autonomous government which never got into thorough operation, so that no one will ever know how it might have worked, there was under the Spanish regime no democratic government and no local self-government. Now, after 20 years, the government of this island is both entirely democratic and in the main locally controlled and responsible to the people. And this is true not only of the political institutions, such as the legislature and the municipal councils and other officials elected by the people, but practically the entire personnel who do the work of the government are native sons and daughters of the island. In the last report of the civil service commission the statement is made that of the 5,953 positions in the government service only 208 are held by those who are not natives

the country, and of these 208 there are 148 teaching positions, mostly teachers of English and technical subjects. In 1913 there were 769 such positions held by others than native Porto Ricans. So here, as everywhere, there has been rapid progress. Just as fast as the Porto Rican people could be prepared and trained in the difficult art of democratic self-government, their local government has been handed over to their own people. Only a few safeguards which seem necessary to protect the island itself from the inexperience and lack of preparation of a large part of its own voters have been retained in the National Government, and these also will be given to the people of the island as soon as the work of education and training can be made more universal and complete.

In short and in fine these two decades of progress made by Porto Rico under the American flag taken all together constitute a record which I believe can not be equaled by any people anywhere in the world in the same length of time. It is a record creditable alike to the Porto Ricans themselves and to the great free Republic to which they owe allegiance. Much of it is due to the liberality and generous aid of the great American Government and people, but most of the credit is due to the splendid cooperation of the Porto Ricans themselves. Without their cooperation little of this progress could have been made. But the people of the island have eagerly availed themselves of every opportunity offered them for improvement. With patriotic devotion to their island and with a real aspiration for progress, they have made a quick response to all the changes that were necessary for development. In politics and government, in education, in commerce and industry, in social and moral improvement, they have offered their cooperation and aid to the forces that have made for betterment. This is the simple truth as to the past, and this is the best augury for the future. It seems easy to predict that, barring untoward and unexpected events, the next two decades will see even more wonderful progress and development.

CONCLUSION.

It is a pleasure to record that the year covered by this report in spite of its vicissitudes of fortune, its excitements and its momentous events, has been a year of great and substantial progress for Porto Rico. The great experiences through which the people have passed, unusual and trying as many of these were, have developed and trained them in many ways.

I would now again respectfully urge upon the attention of Congress and the national authorities at Washington all three of the recommendations submitted in my last annual report, as follows:

(1) That the work of dredging the harbor of San Juan and reclaiming the adjacent swamp land be undertaken in earnest at the earliest possible date. This project was approved by Congress and an initial appropriation made more than two years ago, but it has been delayed by the war and by the unfortunate conditions growing out of the war. Meanwhile the growing demands of the present commerce of the harbor, as well as the great opportunities of the immediate future which threaten to be lost unless promptly improved, plead most earnestly for a speedy beginning of this important enterprise. The insular government has already agreed to perform its full measure of cooperation toward the completion of this work so necessary to the present and future commerce of the greatest port in the island. I hope that it will not be longer delayed.

(2) I also recommend again for the third time that the national rural credit law, now confined in its operation to the continental United States, be extended to Porto Rico.

The agricultural interests of the island, especially the owners of small farms, have expressed a strong desire to be given an opportunity to secure the benefits of this system of rural credit. I am confident that if the law should be so amended as to extend the system to this island it could be managed with entire safety to the farm loan board and with great benefit to the farmers of the island.

(3) I wish again earnestly to recommend that a liberal appropriation be made to be expended under the control of Federal agencies in extending the system of public education in Porto Rico. At its last session the legislature of the island increased its appropriations for this purpose to an amount which may be considered the limit of their resources. But the task of overcoming the accumulation of illiteracy is too great for the local resources within a reasonable time. Education of the people of Porto Rico strikes straight at the heart of all the numerous problems of the island. The need is urgent and the time is opportune. In the name of the 434,000 children of the island who are of school age and all of them young American citizens, I ask for the help of Congress in this matter.

Very respectfully, your obedient servant,

ARTHUR YAGER,
Governor of Porto Rico.

The SECRETARY OF WAR,
Washington, D. C.

APPENDIXES

APPENDIX I.

EXHIBITS TO THE REPORT OF THE GOVERNOR.

EXHIBIT A.

LEGISLATION.

LIST OF ACTS AND RESOLUTIONS PASSED BY THE LEGISLATURE OF PORTO RICO, NINTH ASSEMBLY, FIRST SESSION, AUGUST 13 TO NOVEMBER 26, 1917, WHICH WERE NOT APPROVED BY THE GOVERNOR, BUT WERE OFFICIALLY PROMULGATED AND PUBLISHED BY VIRTUE OF A DECISION OF THE SUPREME COURT OF PORTO RICO, DATED MARCH 11, 1919, DECLARING THEIR VALIDITY AS LAWS FOR PORTO RICO.

An act providing for the maintenance of the artesian well at Quebradillas, and for other purposes, promulgated March 12, 1919.

An act relative to labor contracts, promulgated March 31, 1919.

An act to protect new industries in Porto Rico by exempting them from taxes for a period not exceeding 10 years as the public service commission may determine, promulgated March 31, 1919.

An act to amend and supplement an act entitled "An act to regulate appeals from judgments of municipal courts in civil cases," approved March 11, 1908, promulgated March 31, 1919.

An act to provide calendars of motions, demurrers, special proceedings, ex parte matters and actions in default, in the district and municipal courts; to establish rules for hearing such cases and terms for the decision thereof, and for other purposes, promulgated March 31, 1919.

An act to fix the term in which district and municipal courts shall render judgment or decision in all civil cases, and for other purposes, promulgated March 31, 1919.

An act to construct an artesian well in the barrio of Hato Tejas, Bayamon, promulgated March 31, 1919.

An act directing the construction of a cistern at Playa de Humacao, appropriating the funds therefor, and for other purposes, promulgated March 31, 1919.

An act for the survey and construction of an artesian well in the jurisdiction of Vega Alta and Dorado, barrio Higuillar, appropriating the necessary funds, and for other purposes, promulgated March 31, 1919.

JOINT RESOLUTIONS.

Joint resolution to authorize the "Sucrerie Centrale Coloso" to claim judicially from The People of Porto Rico the sum of \$6,503.16, unduly paid by way of taxes in the fiscal years 1911-12 and 1912-13, promulgated March 31, 1919.

Joint resolution providing for an indemnity to Notary Juan Zacarias Rodriguez, promulgated March 31, 1919.

LIST OF ACTS AND RESOLUTIONS PASSED BY THE LEGISLATURE OF PORTO RICO, NINTH ASSEMBLY, SECOND SPECIAL SESSION, NOVEMBER 26 TO DECEMBER 7, 1918, AND APPROVED BY THE GOVERNOR.

An act appropriating the sum of \$300,000 for the relief and aid of persons suffering from influenza, and to prevent the propagation of said disease; temporarily creating local boards of charity and determining the precedence or priority of this appropriation over any other no fiscal year appropriation heretofore made, and for other purposes, approved December 4, 1918.

An act providing for the purchase of certain vehicles and materials by the commissioner of health for use in combating the epidemic of influenza, and for other purposes, approved December 7, 1918.

An act making deficiency appropriations for temporary employees for the House of Representatives; employees of the insular government working extra hours; legislative printing; and per diem and traveling expenses of the representatives during the special session of the ninth legislature, and for other purposes, approved December 12, 1918.

An act making deficiency appropriations for payment of employees of the insular government for services rendered the Senate of Porto Rico during extra hours, for per diem and mileage of senators during the second special session of the ninth legislature, and for other purposes, approved December 12, 1918.

An act to reimburse the banks of Porto Rico certain amount advanced for emergency expenditures occasioned by the earthquake, approved December 12, 1918.

An act appropriating the sum of \$11,217.03 to pay certain expenses incurred by the insular telegraph by reason of the earthquakes experienced in the island and of the extraordinary services rendered during the influenza epidemic, and for other purposes, approved December 12, 1918.

An act appropriating the sum of \$25,000 to reimburse municipalities certain amounts expended in combating influenza, approved December 12, 1918.

An act to continue in force the provisions of an act entitled "An act to provide additional revenues for The People of Porto Rico, through the levying of certain additional income taxes, and for other purposes," approved December 4, 1917, for the purpose of reconstructing the insular buildings and aiding the municipalities, school boards, and private persons in the reconstruction of buildings that have been damaged by reason of the recent earthquakes; to create a board; to authorize the Governor of Porto Rico to borrow certain amounts, and for other purposes, approved December 12, 1918.

JOINT RESOLUTIONS.

Joint resolution authorizing municipalities and school boards to contract loans and to levy a special tax for the payment of the principal and interest thereon, said loans to be used exclusively for reconstructing and replacing buildings, works, and property destroyed or lost on account of the earthquakes which occurred during the months of October and November, 1918, and for other purposes, approved December 12, 1918.

Joint resolution to authorize the Governor of Porto Rico to borrow the sum of \$200,000 for combating the epidemic of influenza, approved December 12, 1918.

Joint resolution authorizing the municipalities of Mayaguez, Aguadilla, Aguada, and Anasco to frame a budget for the fiscal year 1919-20 equal to four times the proceeds of their domestic income during the first quarter of the year 1918-19 and to the whole proceeds of the direct tax for the said year for the purpose of enabling the said municipalities to aid themselves in connection with the damages and losses sustained on account of the earthquakes, approved December 12, 1918.

Joint resolutions providing for the transfer to The People of the United States of the land known as "Baluarte de las Animas" belonging to The People of Porto Rico, and which was transferred to the latter by the municipality of San Juan, and for other purposes, approved December 12, 1918.

CONCURRENT RESOLUTION.

Concurrent resolution expressing to the people of France the gratitude of Porto Rico for their generous attitude in connection with the recent earthquake.

LIST OF ACTS AND RESOLUTIONS PASSED BY THE LEGISLATURE OF PORTO RICO, NINTH ASSEMBLY, SECOND SESSION, FEBRUARY 10 TO JULY 6, 1919, AND APPROVED BY THE GOVERNOR.

An act to amend section 3 of an act entitled "An act to regulate the practice of the notarial profession in Porto Rico," approved March 8, 1906; approved April 16, 1919.

An act to amend section 5 of "An Act to regulate the practice of the notarial profession in Porto Rico," approved March 8, 1906; and for other purposes, approved April 28, 1919.

Act to amend section 331 of the Political Code, approved May 6, 1919.

An act to amend sections 1 and 16 of "An act to establish standard systems of weights and measures; to regulate the purchase and sale of commodities and the ascertainment of weights and measures in industrial and commercial transactions and to prevent fraud therein, and for other purposes," approved August 18, 1913; approved May 6, 1919.

An act granting Manuel Argueso the right to redeem certain real property sold at public auction for the payment of rentals due on certain mining properties, thus allowing said redeemed property to be donated for charitable purposes, approved May 15, 1919.

An act authorizing the municipality of Villalba to expend in the purchase of a house and land for a town hall, the sum of \$3,500 out of the cash surplus remaining from ordinary funds of the municipality, approved May 16, 1919.

An act to amend section 1 of act No. 62, entitled "An act to create a pension fund for the teachers of Porto Rico, and for other purposes," approved December 5, 1917; approved May 16, 1919.

An act establishing the width of insular and municipal roads, approved May 16, 1919.

An act to authorize the municipality of Fajardo to levy a special tax for the payment of certain indebtedness contracted by it under the loans for \$112,000, and \$11,400 for certain public improvements, approved May 16, 1919.

An act to promote the education of illiterate children and adults, approved May 20, 1919.

An act to amend sections 40, 43, and 55 of the school law, approved May 20, 1919.

An act to determine the equivalence of a diploma of principal teacher, and for other purposes, approved May 20, 1919.

An act to amend section 4 of an act entitled "An act to establish a registry of affidavits or declarations executed before notaries and other officers," approved March 12, 1908; approved May 22, 1919.

An act to regulate examinations for master plumbers, and for other purposes, approved May 24, 1919.

An act to establish elementary night schools in the rural districts of Porto Rico, and for other purposes, approved May 26, 1919.

An act to designate the first Sunday of the second month of the school course of each year as "Teacher's Day," and for other purposes, approved May 27, 1919.

An act to prevent the introduction into Porto Rico of plant and insect diseases and pests, and for other purposes, approved May 27, 1919.

An act to regulate the registration and inspection of commercial fertilizers, fertilizing substances and substances for amending the soil in Porto Rico, approved May 27, 1919.

An act to regulate emigration from Porto Rico, and for other purposes, approved May 29, 1919.

An act to amend section 186 of the Code of Criminal Procedure of Porto Rico, as amended by an act of March 10, 1904; approved May 29, 1919.

An act to amend an act providing for the registration of births and suspending for one year any act in conflict herewith, approved May 29, 1919.

An act to amend section 302 of an act relative to the levying and collecting of taxes, approved March 9, 1905, and amended by subsequent laws, approved May 31, 1919.

An act authorizing the municipality of Cayey to levy and collect a tax of twenty-five one-hundredths of 1 per cent on the value of all real property in said municipality, for the construction of a cemetery in said city and improving the conditions of the aqueduct thereof, approved May 31, 1919.

An act authorizing the municipality of Arecibo to expend 25 per cent of the surplus remaining from regular funds of the year 1917-18, approved May 31, 1919.

An act authorizing the municipality of Penuelas to levy a special tax for the purpose of redeeming the issue of bonds made by said municipality to satisfy the debt contracted for the construction of the aqueduct, and for other purposes, approved May 31, 1919.

An act making appropriations to meet obligations contracted in the fiscal year 1915-16, and to cover deficiencies in appropriations for the fiscal year ending June 30, 1919, approved May 31, 1919.

An act authorizing the municipality of Lares to levy a special tax for the purpose of paying the indebtedness contracted for the construction of the aqueduct and sewerage system, for certain public improvements, hospital services, and for other purposes, approved May 31, 1919.

An act authorizing the municipality of Barranquitas to expend in the acquisition of land and material for the establishment of a new cemetery, the sum of \$568.66 or such part thereof as may be necessary, remaining cash balance of road funds on June 30, 1918, and for other purposes, approved May 31, 1919.

An act authorizing the municipality of Cayey to expend the surplus remaining from the budget of 1917-18 in paving the public square and in other works, and for other purposes, approved May 31, 1919.

An act for the construction of a schoolhouse in the municipality of Adjuntas and appropriating funds for such purposes, approved June 3, 1919.

An act to provide for the construction of a high school building in Caguas, and for other purposes, approved June 3, 1919.

An act to amend paragraph 7 of section 249 of the Code of Civil Procedure, approved June 3, 1919.

An act appropriating the sum of \$35,000 for rebuilding and equipment of a building devoted to the teaching of agriculture in the Mayaguez College of Agriculture and Mechanic Arts, and for other purposes, approved June 3, 1919.

An act providing that in making purchases of furniture, articles and supplies for the departments and offices of the Insular Government, as well as for municipalities, school boards or any other public body, preference shall be given to furniture, articles and supplies manufactured or produced in the country, and further providing that notice shall be given certain manufacturers of such articles, and for other purposes, approved June 3, 1919.

An act to amend section 1 of joint resolution No. 20, approved November 30, 1917, "To reimburse the school board of Ponce for satisfaction of a judgment," approved June 3, 1919.

An act to prevent, and aid in the settlement of, strikes and lockouts, approved June 3, 1919.

An act to authorize the board of trustees of the Polytechnic Institute of Porto Rico established at San German to confer university degrees, and for other purposes, approved June 4, 1919.

An act granting to former owners of property sold after July 1, 1901, for nonpayment of taxes, or to any person interested therein, the right to redeem such property under certain conditions, approved June 5, 1919.

An act creating scholarships to send fourth-year high-school graduates to study in schools of arts and trades in the United States, and for other purposes, approved June 5, 1919.

An act to amend Act No. 43 of November 30, 1917, entitled "An act to establish, develop and maintain a public park in the municipality of San Juan to be known as 'Muñoz Rivera Park'," approved June 5, 1919.

An act making deficiency appropriation for temporary employees of the House of Representatives; creating the office of secretary-stenographer to the finance committee and providing for contingent expenses and legislative printing for the fiscal year ending June 30, 1919, and for other purposes, approved June 5, 1919.

An act to pay the expenses of the banquet tendered the French Navy by the legislature, approved June 5, 1919.

An act to amend section 3 of an act entitled "An act providing for the organization of a board of medical examiners," approved March 12, 1903, as amended March 9, 1911, approved June 7, 1919.

An act to provide for the construction of a graded school building in the town of Juncos; appropriating the sum of \$40,000 therefor, and for other purposes, approved June 7, 1919.

An act establishing minimum wages for workingwomen and for other purposes, approved June 9, 1919.

An act authorizing the sale of a lot belonging to The People of Porto Rico to the "Liceo Ponceño," under certain conditions, became a law without executive action, June 10, 1919.

An act providing for the construction of a capitol building and for the receipt in the Treasury of Porto Rico of the sum of \$500,000 from the food commission fund, for the sale at public auction of the building generally known as the Diputación Provincial, and to repeal "An act to provide funds for the erection of an insular building to be known as the capitol of Porto Rico, approved March 12, 1908, became a law without executive action, June 13, 1919.

An act authorizing the municipal council of Juana Diaz to levy an additional tax on real and personal property during such fiscal years as may be necessary for the purpose of carrying out the construction of a waterworks system in the said town, approved June 13, 1919.

An act to authorize an issuance of bonds of The People of Porto Rico in the amount of \$1,000,000 to continue the construction of roads and bridges and for other purposes, in accordance with Act No. 71 of the Legislative Assembly of Porto Rico, approved April 13, 1916, approved June 13, 1919.

An act making deficiency appropriation for the department of justice for the fiscal year ending June 30, 1919, approved June 14, 1919.

An act to amend sections 1, 2, 7, 9, 10, 11, 12, and 13 of an act entitled "An act to organize the Institute of Tropical Medicine of Porto Rico," approved March 13, 1913, and for other purposes, approved June 14, 1919.

An act to authorize and empower the commissioner of education to establish in the high schools training courses for rural teachers, and for other purposes, approved June 14, 1919.

An act authorizing the school board of Guayama to levy an additional tax on real and personal property during such fiscal years as may be necessary for the purpose of carrying out the construction of a high-school building, approved June 14, 1919.

An act authorizing the school board of San Lorenzo to levy an additional tax on real and personal property during such fiscal years as may be necessary for the purpose of carrying out the construction of a school building, approved June 14, 1919.

An act to provide revenues for The People of Porto Rico by levying certain excise and license taxes for the practice of certain professions, industries, and businesses; to regulate the manufacture, use and sale of alcoholic preparations; to impose certain penalties, to repeal certain excise and license tax laws now in force, and for other purposes, approved June 15, 1919.

An act providing for the drainage of the zone of Cabo Rojo, barrio Bajura, appropriating the funds necessary therefor, and for other purposes, approved June 16, 1919.

An act fixing the term of office of justice of the peace, approved June 17, 1919.

An act establishing the grand jury and regulating the proceedings, powers, and duties thereof, determining the form of indictments by the grand jury, the presentation and reading of the same, and the proceedings subsequent to the presentation, approved June 18, 1919.

An act to authorize the issuance by the insular government of Porto Rico of bonds for an amount not exceeding \$3,000,000, and for other purposes, approved June 18, 1919.

An act to establish legal units of measures for gas and electricity; to create an inspection service of electric, gas, and water meters under the jurisdiction of the Bureau of Weights and Measures to authorize the executive secretary of Porto Rico to regulate the said service; to appropriate the necessary funds therefor, and for other purposes, approved June 19, 1919.

An act to amend section 28 of an act entitled "Workmen's accident compensation act," approved February 25, 1918, approved June 19, 1919.

An act to amend sections 2, 3, 5, 6, 8, and 13 of Act No. 10 on workmen's compensation, approved February 25, 1918, approved June 19, 1919.

An act providing for the construction of an irrigation system in the vicinity of Isabela and Aguadilla; for the formation of a temporary and permanent irrigation district, and revenues derived therefrom; for the temporary appropriation of \$200,000 to begin such work, and for other purposes, approved June 19, 1919.

An act to create the Historical Archive of Porto Rico, approved June 20, 1919.

An act providing that before using school buildings for hospitals the written consent of the school boards and of the commissioner of education shall be obtained, approved June 20, 1919.

An act appropriating the sum of \$40,000 for the construction of four buildings, at the rate of \$10,000 each, two of which shall be hospitals for studying and combating uncinariasis, and the other two for malaria, and for other purposes, approved June 20, 1919.

An act to amend sections 15 and 16 of "An act to authorize the issuing of bonds for the purpose of constructing houses for artisans and laborers, provide for the leasing of the same, with a certain right to the ownership thereof, improve the sanitary conditions of certain lands of The People of Porto Rico; promote the creation of farms to be leased to farm laborers and to grant them title thereto, and for other purposes," approved June 20, 1919.

An act to amend sections 2 and 4 of Act No. 8, approved December 12, 1918, and entitled "An act to continue in force the provisions of an act entitled 'An act to provide additional revenues for The People of Porto Rico through the levying of certain additional income taxes, and for other purposes,' approved December 4, 1917, for the purposes of reconstructing the insular buildings and aiding the municipalities, school boards, and private persons in the reconstruction of buildings that have been damaged by reason of the recent earthquakes; to create a board; to authorize the Governor of Porto Rico to borrow certain amounts, and for other purposes," approved June 20, 1919.

An act authorizing the school board of Cabo Rojo to levy an additional tax on real and personal property during such fiscal years as may be necessary for the purpose of carrying out the construction of a school building, approved June 20, 1919.

An act making deficiency appropriations for the payment to temporary employees and employees of the insular government rendering services in the bureau of translations and in the Senate of Porto Rico in extra hours during the second regular session of the ninth legislative assembly, and for other purposes, approved June 20, 1919.

An act making appropriations for the necessary expenses of carrying on the government of Porto Rico for the fiscal years ending June 30, 1920, and June 30, 1921; respectively, and for other purposes, approved June 20, 1919.

An act to amend section 7 of an act entitled "An act authorizing the commissioner of the interior to survey and expropriate a certain section of land for the construction of a road beginning at the San Antonio Bridge, municipality of San Juan, and ending at the Martin Peña Bridge, which land lies between the railroad and the Military Road, and for other purposes, approved June 21, 1919.

An act to regulate the work of women and children and to protect them against dangerous occupations, approved June 21, 1919.

An act to promote the welfare of The People of Porto Rico; creating a Social Welfare Institute; providing its organization, object, powers, and duties, and for other purposes, approved June 21, 1919.

An act to authorize the treasurer of Porto Rico to purchase unmatured bonds of The People of Porto Rico, approved June 23, 1919.

An act to create a leper asylum and to provide for the isolation of the lepers of the island of Porto Rico, approved June 24, 1919.

An act to establish a line of communication between Fajardo and Vieques, and Vieques and Culebra, appropriating the necessary funds therefor, and for other purposes, approved June 24, 1919.

An act providing for the payment of \$50 to Lawyer Celestino Iriarte, jr., for services rendered to a member of the insular police, approved June 24, 1919.

An act to establish the law of registrations and elections, approved June 25, 1919.

An act to provide revenues for The People of Porto Rico through the levying of certain income taxes; to repeal the act of Congress of the United States of September 8, 1916, amended October 3, 1917; to repeal section 1 of Act No. 8 of the Legislature of Porto Rico, approved December 12, 1918; to appropriate the sum of \$600,800 for the carrying out of the provisions of sections 2, 4, and 5 of the aforesaid Act No. 8, and for other purposes, approved June 26, 1919.

An act to amend section 3 of Act No. 27 of November 27, 1917, entitled "An act to provide for the substitution, at the option of a party, of the bill of exceptions and statement of the case for a transcript of the evidence, prepared by the stenographer, presented to the secretary, and approved by the judge with notice to the parties, and for other purposes," and section 299 of the Code of Civil Procedure, approved June 26, 1919.

An act to amend Act No. 71, "making appropriations for the necessary expenses of carrying on the government of Porto Rico for the fiscal years ending June 30, 1920, and June 30, 1921, respectively, and for other purposes," approved June 20, 1919, approved July 4, 1919.

An act appropriating the sum of \$800 for the erection of a monument to Muñoz Rivera on the grounds of the University of Porto Rico, and for other purposes, approved July 5, 1919.

An act to amend section 178 of the Code of Criminal Procedure and giving the right to trial by jury in some cases of misdemeanor, approved July 22, 1919.

An act establishing a system of local government and reorganizing municipal services, approved July 31, 1919.

JOINT RESOLUTIONS.

Joint resolution declaring distinguished Members of the Congress of the United States guests of the Legislature of Porto Rico, and making the necessary appropriation in connection therewith, approved April 16, 1919.

Joint resolution authorizing the commissioner of agriculture and labor to appoint an inspector to assist the chief forester of Porto Rico in the inspection service, approved May 1, 1919.

Joint resolution to reimburse Ramón Labiosa house rent paid by him as jailer of the district jail of Mayaguez from October 11, 1918, date of the earthquake, until June 30, 1919, and for other purposes, approved May 15, 1919.

Joint resolution to dissolve certain domestic corporations and associations, approved May 15, 1919.

Joint resolution to protect the employees of the government of Porto Rico who entered the service of the United States during the present emergency, and for other purposes, approved May 15, 1919.

Joint resolution authorizing the municipality of Aguadilla to frame a budget for 1919-20, on the basis of the receipts for the fiscal year 1917-18, and for other purposes, approved May 16, 1919.

Joint resolution authorizing the municipality of Yabucoa to dispose of the surplus of 25 per cent in its budget for 1917-18 to be devoted to municipal public works, and for other purposes, approved May 16, 1919.

Joint resolution authorizing the municipality of Comerio to expend the 25 per cent surplus remaining from its budget for 1917-18 in municipal public works, and for other purposes, approved May 16, 1919.

Joint resolution authorizing the municipality of Isabela to frame a budget for the coming fiscal year 1919-20, in the sum of \$10,396.73, in order to place said municipality in position to help itself, because of the losses caused thereto by the recent earthquakes, approved May 16, 1919.

Joint resolution authorizing the municipality of Humacao to dispose of the 25 per cent surplus in its budget for 1917-18 to be devoted to certain appropriations in the current budget of 1918-19, and for other purposes, approved May 16, 1919.

Joint resolution authorizing the commissioner of the interior to sell to the succession of Vicente Vázquez, of Salinas, a parcel of land held by said succession for many years, approved May 20, 1919.

Joint resolution authorizing the municipality of San Juan to expend for current obligations a certain surplus remaining from the proceeds of the loan contracted by said municipality for works in connection with the installation of the National Army cantonment at Camp Las Casas, approved May 21, 1919.

Joint resolution to amend "Joint resolution appropriating the sum of \$600,000, payable in annual instalments of \$50,000, on the 1st day of July of each year subsequent to the termination of the work of dredging the harbor of San Juan and reclaiming the mangrove swamps adjacent thereto, for the purpose of reimbursing the Government of the United States in said amount as part payment of the expenditures to be made by the United States in said work, and for other purposes," approved November 22, 1917, providing for an appropriation in annual instalments of \$50,000 on the 1st day of July of each year subsequent to the termination of the work of dredging the harbor of San Juan for a period of 12 years, and thereafter an appropriation in annual instalments of \$100,000 on the 1st day of July of each year until the total sum, as provided by the Congress of the United States to be repaid to the United States as part payment of the expenditures to be made in said work, is reimbursed, approved May 22, 1919.

Joint resolution regulating the sale of seats in moving-picture theaters devoted to public exhibitions, and for other purposes, approved May 24, 1919.

Joint resolution to remedy in part the losses caused youths who, on being discharged from the Army, must continue their studies in the colleges of Porto Rico, and for other purposes, approved May 26, 1919.

Joint resolution authorizing the commissioner of the interior to expend certain surpluses remaining from items appropriated in act No. 8, approved December 12, 1918, entitled "An act to continue in force the provisions of an act entitled 'An act to provide additional revenues for The People of Porto Rico, through the levying of certain additional income taxes, and for other purposes,'" in defraying such expenses as may be incurred in carrying out repairs to be made to the Boys' Charity School of Santurce, and in meeting the extra expenditure of constructing and maintaining public roads, and of constructing a school building in Moca, and for other purposes, approved May 29, 1919.

Joint resolution authorizing the commissioner of the interior to lease for a term of not over 30 years certain lands belonging to The People of Porto Rico, approved May 29, 1919.

Joint resolution authorizing the municipality of Maunabo to transfer a loan for the construction of a municipal building, jail, and peace court, and for other purposes, approved May 31, 1919.

Joint resolution authorizing the commissioner of the interior to dispose of a certain lot of The People of Porto Rico, and for other purposes, approved May 31, 1919.

Joint resolution authorizing the commissioner of the interior to sell at public vendue a house belonging to The People of Porto Rico, situate in the city of Arecibo, approved June 3, 1919.

Joint resolution to establish a system of telegraph money orders in all insular telegraph offices, approved June 5, 1919.

Joint resolution to regulate the sale of foreign coffee, whether pure or blended; to provide funds to defray the expenses of such regulation, and for other purposes, approved June 5, 1919.

Joint resolution authorizing the commissioner of the interior to sell at public auction a parcel of land of 35 cuerdas at Peña Pobre ward of the municipality of Naguabo, and for other purposes, approved June 9, 1919.

Joint resolution to provide for the payment of certain public-school teachers of a certain amount of money accruing to them as pensions on retirement, and for other purposes, approved June 12, 1919.

Joint resolution providing for the reimbursement by the treasurer of Porto Rico to José J. Benítez of certain amounts collected in excess of the inheritance tax of the estate of Carlota Sampayo, approved June 12, 1919.

Joint resolution providing the necessary means for the improvement and extension of the insular telephone system in San Juan, and for other purposes, approved June 19, 1919.

Joint resolution for the cooperation of The People of Porto Rico, through the commissioner of agriculture and labor, in holding of industrial and agricultural exhibitions in the city of Ponce, and for other purposes, approved June 19, 1919.

Joint resolution authorizing all citizens of the United States residing in Porto Rico who shall have passed any course in law, in accordance with former laws, to complete their law course pursuant to the law in force at the time they passed their first year's examination, approved June 20, 1919.

Joint resolution authorizing Francisco Cerdeira and the succession of José Veray Llamas to sue The People of Porto Rico for damages said to have been caused by alleged fault or negligence of officials of The People of Porto Rico in occasion of the earthquake occurred about October 11, 1918, approved June 20, 1919.

Joint resolution authorizing the treasurer of Porto Rico to transfer the funds of the extinguished corporation La Egida del Maestro to the "Teachers' pension fund," approved June 20, 1919.

Joint resolution to create an emergency fund for the payment of physicians, health inspectors, and other employees for the suppression of dangerous and transmissible diseases, and for other purposes, approved June 20, 1919.

Joint resolution providing that the macadam road running from the town of Guánica to insular road No. 2, and joining the latter at kilometer 226.65, Sabana Grande-Yauco section, be declared an insular road,; appropriating the sum of \$9,000 for the immediate repair of said road, and for other purposes, approved June 21, 1919.

Joint resolution to refund or reimburse Pedro Alfonso Rosso a certain amount of money paid by him for an estate auctioned at the office of the collector of internal revenue of Arecibo, and the amount of taxes thereon, and for other purposes, approved June 23, 1919.

Joint resolution to restore to or reimburse José Limón de Arce certain sums paid for the purchase of two estates at public sale in the internal-revenue office of Arecibo, and the taxes paid thereon, and for other purposes, approved June 23, 1919.

Joint resolution authorizing the commissioner of the interior to sell and transfer the ownership of a lot belonging to The People of Porto Rico to the congregation "Siervas de María" of Mayaguez, approved June 24, 1919.

Joint resolution declaring the road constructed by the municipality of Río Piedras, from kilometer 13 of the Military Road, through the barrio of Monacillos, to the Guaynabo-San Juan road, to be an insular road, and for other purposes, approved June 26, 1919.

CONCURRENT RESOLUTIONS.

Concurrent resolutions expressing the sorrow of The People of Porto Rico at the death of ex-President Theodore Roosevelt.

Concurrent resolution praying the Congress of the United States for an appropriation to build a breakwater in the port of Ponce.

EXHIBIT B.

LIST OF APPOINTMENTS BY THE GOVERNOR DURING THE FISCAL YEAR 1918-19.

JUDICIAL APPOINTMENTS.

Supreme Court of Porto Rico:

Salvador Mestre, fiscal, December 5, 1918.

José E. Figueras, fiscal, June 18, 1919.

Joaquín López Cruz, secretary-reporter, December 5, 1918.

District courts:

Judges and fiscals—

Rafael Rivera, Zayas, fiscal, Aguadilla, November 18, 1918; December 5, 1918.

José E. Figueras, fiscal, Ponce, November 18, 1918; December 9, 1918.

Charles E. Foote, judge, Mayaguez, December 5 1918.

District courts—Continued.

Marshals—

Mayaguez, February 28, 1919.

San Juan, section 1, July 18, 1918; December 5, 1918.

San Juan, section 2, July 18, 1918; December 5, 1918.

Municipal courts:

Judges—

Adjuntas, June 18, 1919.

Aguadilla, August 22, 1918; December 5, 1918.

Añasco, December 5, 1918.

Arecibo, February 28, 1919.

Cabo Roio, February 28, 1919.

LIST OF APPOINTMENTS BY THE GOVERNOR DURING THE FISCAL YEAR 1918-19—Continued.

JUDICIAL APPOINTMENTS—continued.

Municipal courts—Continued.

Judges—Continued.

Caguas, September 26, 1918; December 5, 1918.
 Coamo, September 19, 1918; December 5, 1918.
 Fajardo, March 1, 1919.
 Humacao, December 27, 1918; February 28, 1919.
 Lares, February 28, 1919.
 San Germán, June 18, 1919.
 San Juan, August 22, 1918; December 5, 1918.
 Utuado, April 28, 1919.
 Vieques, June 2, 1919.
 Yauco, June 18, 1919.

Secretaries—

Bayamón, June 18, 1919.
 Caguas, February 28, 1919.
 Mayaguez, April 27, 1919.
 Patillas, December 5, 1918.
 San Germán, September 23, 1918; December 5, 1918.
 Yauco, December 5, 1918.

Municipal courts—Continued.

Marshals—

Adjuntas, December 5, 1918.
 Camuy, June 18, 1919.
 Manatí, June 18, 1919.
 San Lorenzo, June 18, 1919.
 Utuado, December 21, 1918; February 28, 1919.
 Vega Baja, June 18, 1919.

Justices of the peace:

Barceloneta, June 18, 1919.
 Bayamón, November 15, 1918; January 17, 1919; February 28, 1919.
 Caguas, December 9, 1918.
 Fajardo, March 3, 1919.
 Guanica, June 18, 1919.
 Juncos, December 5, 1918.
 Luquillo, January 13, 1919; February 28, 1919.
 Maricao, September 14, 1918; December 5, 1918; June 18, 1919.
 Toa Alta, June 18, 1919.

MUNICIPAL APPOINTMENTS—ALCALDES.

Aibonito, December 5, 1918.
 Arecibo, December 5, 1918.
 Arroyo, March 21, 1919.
 Bayamón, February 28, 1919.
 Carolina, June 2, 1919.
 Comerío, March 21, 1919.
 Culebra, December 5, 1918.
 Fajardo, December 5, 1918.
 Guanica, December 9, 1918.
 Guayama, June 2, 1919.
 Humacao, December 5, 1918.
 Las Piedras, September 26, 1918; December 5, 1918.
 Loiza, December 5, 1918.

Luquillo, February 28, 1919.
 Manatí, January 27, 1919; February 28, 1919.
 Mayaguez, October 15, 1918; December 9, 1918.
 Naguabo, February 28, 1919; June 2, 1919.
 Patillas, April 17, 1919.
 Peñuelas, September 21, 1918; December 5, 1918.
 Ponce, November 18, 1918; December 9, 1918.
 Río Grande, December 5, 1918.
 Toa Alta, December 26, 1918; February 28, 1919.

APPOINTMENTS TO FILL VACANCIES IN MUNICIPAL COUNCILS.

Adjuntas, 4.
 Aguada, 2.
 Aguadilla, 1.
 Aguas Buenas, 3.
 Aibonito, 2.
 Arecibo, 5.
 Arroyo, 3.
 Barros, 3.
 Bayamón, 4.
 Cabo Rojo, 2.
 Camuy, 1.
 Carolina, 5.
 Cayey, 1.
 Ceiba, 2.
 Ciales, 7.
 Cidra, 1.
 Coamo, 4.
 Dorado, 1.
 Fajardo, 4.

Guánica, 5.
 Guayama, 3.
 Guayanilla, 2.
 Guaynabo, 2.
 Gurabo, 5.
 Hatillo, 1.
 Hormigueros, 4.
 Humacao, 8.
 Isabela, 4.
 Jayuya, 1.
 Juana Díaz, 1.
 Juncos, 3.
 Las Marías, 1.
 Las Piedras, 4.
 Loíza, 4.
 Luquillo, 1.
 Manatí, 3.
 Maricao, 3.
 Maunabo, 1.

Mayaguez, 4.
 Moca, 4.
 Morovis, 2.
 Naguabo, 1.
 Patillas, 3.
 Peñuelas, 4.
 Ponce, 2.
 Río Grande, 4.
 San Germán, 2.
 San Juan, 4.
 San Lorenzo, 3.
 San Sebastian, 1.
 Santa Isabel, 2.
 Toa Alta, 2.
 Toa Baja, 1.
 Trujillo Alto, 3.
 Utuado, 2.
 Vega Alta, 1.

MISCELLANEOUS APPOINTMENTS.

- Board of commissioners for the promotion of uniform legislation: Adolf G. Wolf,
July 31, 1918.
- Board of dental examiners: Dr. Lorenzo R. Noa, December 5, 1918.
- Board of equalization and review:
Pablo Vilella Pol, December 5, 1918.
Arturo Bravo, December 11, 1918.
- Board of medical examiners:
Dr. Francisco Matanzo, December 5, 1918.
Dr. Manuel Quevedo Báez, December 5, 1918.
Dr. Esteban García Cabrera, December 9, 1918.
- Board of management, Ponce Pier:
Rodulfo del Valle, January 3, 1919; February 28, 1919.
Fernando Luis Toro Vendrell, January 20, 1919, February 28, 1919.
Julio Torres, February 28, 1919.
Salvador Mandry, February 28, 1919.
- Board of pharmacy:
José J. Alvarez, December 5, 1918.
Miguel Wiewall, June 2, 1919.
Juan Planellas, June 2, 1919.
- Board of trustees, Carnegie Library:
Isabel Andreu de Aguilar, December 5, 1918.
Josefa Noel, December 5, 1918.
Luis Muñoz Morales, December 5, 1918.
W. G. Coxhead, December 5, 1918.
- Board of trustees, University of Porto Rico: Guillermo Esteves, January 3, 1919.
- Board of veterinary examiners: Dr. Jaime Bagué, June 2, 1919.
- Commissioner of deeds: Ella F. Braman, New York, July 18, 1918.
- Culebra:
Tiburcio Gonzáles, secretary to the mayor, August 14, 1918, December 5, 1918.
W. C. Pressly, municipal physician, August 28, 1918.
- District chiefs of police:
Third class, 2.
Fourth class, 4.
Fifth class, 4.
Sixth class, 4.
Seventh class, 5.
Eighth class, 5.
- Insular board of health:
Dr. J. A. López Antongiorgi, December 5, 1918.
Dr. José S. Belaval, December 5, 1918.
Juan Hernández López, December 5, 1918.
Dr. Rafael Bernabe, June 2, 1919.
- Insular police commission: Nicolás Santini, December 5, 1918.
- Insular racing commission: Geo. R. Shanton, July 9, 1918.
- Municipal boards of agriculture:
Arecibo, Ildefonso Estela, July 27, 1918.
Carolina—
Manuel Millán, July 15, 1918.
Andrés Landráu Tadeo, May 9, 1919.
Morovis—
José Barreras Martínez, November 7, 1918.
Arturo Guerrero Otero, November 7, 1918.
Ramón Castro Aguirre, November 7, 1918.
Yabucoa, Augustín Díaz Smaine, November 9, 1918.
- Pension board:
María González de Amy, December 5, 1918.
Antonio Sarriera, December 5, 1918.
José Otero, December 5, 1918.
- Registrars of property:
Francisco Socorro, Guayama, August 13, 1918, December 5, 1918.
Augusto Malaret, Mayaguez, December 5, 1918.
Pedro Gómez Lasserre, Caguas, December 9, 1918.
Victor Burset Masferrer, December 9, 1918.
- San Juan Harbor board: Federico Vall-Spinosa, January 20, 1919, February 28, 1919.

Special fiscal at large:

Jaime Sifre, jr., December 5, 1918.

Rafael Rivera Zayas, June 18, 1919.

Workmen's relief commission:

José A. Canals, December 5, 1918.

José Reguero Feliú, December 5, 1918.

Abraham Peña, December 9, 1918.

EXHIBIT "C."

TABLE I.—*Personnel of the insular police of Porto Rico at the close of the fiscal year ending on June 30, 1919, giving also distribution of horses and bicycles in the various districts.*

Districts.	District chiefs.	Ser-geants.	Cor-porals.	Guards-men.	Deteo-tives.	Total.	Horses.	Bicycles.
Adjuntas.....	1		1	2		4		
Aguada.....			1	3		4	1	1
Aguadilla.....	1	1		8	1	11	1	1
Agua Buenas.....	1			2		3		
Albionito.....	1			2		3	1	
Anasco.....	1		1	6		8	2	1
Arecibo.....	1		2	20		23	2	2
Arroyo.....	1			4		5	1	3
Barceloneta.....	1			4		5	3	2
Barranquitas.....	1			1		2		
Begos.....	1			2		3		
Bayamon.....	2	1	2	29	1	35	4	2
Cabo Rojo.....	1			5		6	1	1
Caguas.....	2		2	10		14	1	2
Camuy.....	1			3		4		
Carolina.....	1			4		5	1	1
Cayey.....	2	1		9		12	2	2
Ceiba.....	1			3		4		1
Ciales.....	1			3		4		
Cidra.....		1		2		3		
Coamo.....	1			1		5	1	1
Comerio.....			1	4		5	1	
Coroal.....	1			2		3		
Detective bureau.....			1	1	12	14		
Dorado.....	1	1		3		4	1	1
Fajardo.....	1			10		12	2	1
Guanica.....	1		1	6		8		1
Guayama.....	1		2	16		19	4	1
Guayanilla.....	1			3		4		
Guaynabo.....				3		3		
Gurabo.....	1			3		4		
Hatillo.....			1	3		4	1	
Headquarters.....			1	14		15		1
Hormigueros.....	1			2		3		
Humacao.....	1		1	8		10	3	2
Isabela.....	1			2		3	1	1
Jayuya.....		1		2		3		
Juana Diaz.....	1			8		9	2	2
Juncos.....	1			5		6		1
Lajas.....	1			2		3	1	
Lares.....	1			3		4		
Las Marias.....				3		3		
Las Piedras.....			1	3		4		
Lora.....	1			4		5		1
Luquillo.....	1			2		3		1
Manati.....	1		1	9		11	2	2
Maricao.....	1			2		3	1	
Maunabo.....	1			3		4	1	1
Mayaguez.....	1	1	2	31	1	36	4	5
Moca.....	1			2		3		
Morovis.....	1			2		3		
Naguabo.....	1			5		6	1	
Naranjito.....				2		2		
Patillas.....	1			4		5	2	1
Penuelas.....	1			3		4	2	1
Ponce.....	1	2	2	38	5	48	1	3
Quebradillas.....	1			3		4		1
Rincon.....	1			3		4		
Rio Grande.....	1			4		5		
Rio Piedras.....	1		1	10		12	1	2
Salinas Grande.....	1			2		3	1	1
Salinas.....	1		1	6		8	1	4
San German.....	1			6		7		1
San Juan.....	2	2	7	147		158	8	3

TABLE I.—*Personnel of the insular police of Porto Rico at the close of the fiscal year ending on June 30, 1919, giving also distribution of horses and bicycles in the various districts—Continued.*

Districts.	District chiefs.	Ser-geants.	Cor-porals.	Guard-men.	Deteo-tives.	Total.	Horses.	Bicycles.
San Lorenzo.....		1		3		4	1	
San Sebastian.....	1			3		4		
Santa Isabel.....				6		7	2	2
Toa Alta.....	1			2		3	1	
Toa Baja.....	1			4		5	1	1
Trujillo Alto.....	1			1		2		
Utusado.....	1			6		7		
Vega Alta.....	1			3		4	1	
Vega Baja.....	1			5		6	1	1
Vieques.....	1		1	10		12	2	1
Villalba.....			1	2		3	1	
Yabucoa.....	1			5		6	1	
Yauco.....	1	1		6		8	2	2
Total.....	67	14	34	576	20	711	74	65

REMARKS.—Chief of insular police, the adjutant, and the chief of detectives are detached at police headquarters, San Juan. At the close of the fiscal year, there were four vacancies in the force, consisting of one guardsman and three third-class detectives.

TABLE II.—*Number of felonies committed by both sexes during the fiscal year ending June 30, 1919.*

Crimes.	Acquitted.		Sentenced.		Pending.		Total.
	Men.	Women.	Men.	Women.	Men.	Women.	
Adultery.....					1		1
Arson.....	4			1	2		7
Attempt to murder.....	7		7		20		34
Burglary.....	13		140		64	1	218
Cattle stealing.....	3		29				32
Counterfeit of coins.....			3				3
Conspiracy.....	1		9				10
Crime against public health and security.....	11		22	26	3		63
Crime against nature.....			1		2		3
Falsification.....			16	1	14		31
Grand larceny.....	2	2	7		10		23
Homicide.....	5		8	1	18	1	33
Incest.....	3		2		3	1	9
Mayhem.....			4	1	6		11
Murder.....	2		10	2	14	1	29
Rape.....	4		4				8
Robbery.....			6		7		13
Seduction.....	1		22		19		42
Postal law.....	1		2		1	1	5
Total.....	57	2	292	32	184	5	573

RECAPITULATION.

Cases tried, males.....	349
Cases tried, female.....	34
Cases pending.....	189
Grand total.....	573

TABLE III.—The number of arrests made, convictions and acquittals, during the fiscal year ending June 30, 1919, for the following offenses and crimes.

Crimes.	Acquitted.		Sentenced.		Total.	
	Men.	Women.	Men.	Women.	Men.	Women.
Abuse of confidence.....	21	3	124	8	155	11
Adultery.....	9	6	63	18	72	24
Animals, cruelty to.....	85		1,086		1,171	
Arson.....	4			1	4	1
Article 283, Penal Code, violation of.....	2		1	1	3	1
Article 287, Penal Code, violation of.....		1	15	78	15	79
Article 288, Penal Code, violation of.....	5	2		13	5	15
Article 300, Penal Code, violation of.....	15	1	96		111	1
Article 305, Penal Code, violation of.....			6	6	6	
Article 388, Penal Code, violation of.....			1	1	1	
Article 553, Penal Code, violation of.....	114		573	6	687	5
Assault and battery.....	217	19	966	49	1,183	68
Automobile law, infraction of.....	363	1	1,263	1	1,626	2
Bigamy.....	1				1	
Birds' law, violation of.....	4		14	1	18	1
Burglary.....	13		140		153	
Cattle stealing.....	3		29		32	
Caution.....	1				1	
Coins, counterfeit of.....			3		3	
Conspiracy.....	1		9		10	
Court, contempt of.....			9	1	9	1
Duels and challenge.....			3	1	3	1
Embezzlement public funds.....	1		1		2	
Excise tax, infraction of.....	47	1	70	2	117	3
Executive power, crime committed by or against the.....			1		1	
Exposures, indecent.....	10	4	39	15	49	19
Falsification.....			2		2	
False pretense.....	14		98		112	
Food commission rules, violation of.....	42	2	196	16	238	18
Forgery.....			7	1	7	1
Gambling.....	1,241	10	9,663	39	10,904	49
Health and safety, crime against the public.....	11		22	26	33	26
Homicides.....	5		8	1	13	1
Incest.....	3				3	
Injury, malicious.....	25		64	2	89	2
Insanity, dangerous.....		2	24	18	24	20
Internal revenue law, violation of.....	2		10		12	
Justice, crime against public.....	22	4	29	2	51	6
Juvenile law, violation of.....	1		6		7	
Labor law, violation of.....	26	1	13	2	39	3
Larceny, grand.....	2	2	16		18	2
Larceny, petit.....	250	16	1,555	35	1,805	51
Larceny (sec. 444-A. P. C.).....			21		21	
Libel.....			1		1	
Lottery tickets, sale of.....			8		8	
Mayhem.....			4	1	4	1
Medicine illegal, practice of.....	2	3	8		10	3
Military service conscription law, violation of.....			25		25	
Minors, corruption of.....	6		4		10	
Minors, neglect of.....	2		10	3	12	3
Minors, working of.....	5	1	11		16	1
Murders.....	2		10	2	12	2
Murder, attempt of.....	7		7		14	
Nature, crime against.....			1		1	
Ordinances, violation of municipal.....	557	105	4,598	304	5,155	409
Organic law, violation of.....	66	2	162	1	228	3
Other crimes.....	71	5	65	42	136	47
Peace, disturbance of the.....	667	219	2,770	563	3,437	782
Perjury.....	1				1	
Postal law, violation of.....	1		2		3	
Profanation national flag.....			1		1	
Prostitution.....	2	150	12	744	14	894
Rape.....	4		4		8	
Road law, violation of.....	25		621		646	
Robbery.....			6		6	
Sanitary law, violation of.....	215	38	1,794	117	2,009	155
Seduction.....	1		22		23	
School law, violation of.....	1		7	3	8	3
Slander.....	6		101		107	
Smuggling.....	1		3		4	
Weapons, carrying deadly.....	96	2	942	3	1,038	5
Weights and measures, violating law of.....	81	4	123	5	204	9
Totals.....	4,379	604	27,611	2,124	31,990	2,723

RECAPITULATION.

Men arrested.....	31,980
Women arrested.....	2,728
Cases pending.....	1,224
Grand total.....	35,943

During the year there were 150 suicides and 96 attempts to suicide.

NOTE.—Arrests by warrants of escaped prisoners and persons requisitioned for and found, not contained in the above statement, amounted to 2,486.

TABLE IV.—*Number of fires which took place in Porto Rico during the fiscal year 1918-19, number of deaths caused thereby, number of and description of property destroyed or damaged, insurance carried, and the approximate amount of loss.*

District.	Death	Property.	Insurance.	Approximate loss.
Aguas Buenas.....		1 factory.....	\$8,200.00	\$11,281.50
Do.....		1 hut.....		40.00
Alfonso.....		1 house.....		180.00
Do.....		do.....		300.00
Do.....	1	1 hut.....		30.00
Arecibo.....		do.....		100.00
Do.....	2	do.....		50.00
Do.....		do.....		125.00
Do.....		500 huts.....		50,000.00
Barceloneta.....		4 huts.....		80.00
Do.....		1 hut.....		25.00
Barranquitas.....		do.....		150.00
Do.....		do.....		150.00
Barros.....		do.....		4.00
Do.....		do.....		35.00
Do.....		do.....		80.00
Bayamon.....		do.....		25.00
Do.....		1 house.....		50.00
Do.....		1 gasoline launch.....		3,000.00
Caguas.....		1 shed.....		1,500.00
Do.....		do.....		1,100.00
Do.....		1 tobacco shed.....		1,500.00
Camuy.....		1 hut.....		75.00
Do.....		do.....		100.00
Carolina.....		do.....		140.00
Cayey.....		1 hut, 2 sheds, 150 hundred-weight tobacco.....		6,000.00
Guanica.....		1 hut.....		8.00
Guayama.....		1 theater.....		400.00
Do.....		2 houses.....	400.00	5,000.00
Do.....		1 shed.....		50.00
Gurabo.....		1 hut.....		25.00
Hatillo.....		do.....		25.00
Do.....		5 huts.....		250.00
Humacao.....		1 house and store.....		900.00
Juncos.....		2 houses.....		800.00
Lajas.....		2 huts.....		100.00
Las Marias.....		1 hut.....		10.00
Las Piedras.....		do.....		100.00
Lotza.....		do.....		20.00
Do.....		do.....		60.00
Luquillo.....		1 bridge.....		500.00
Manati.....		1 hut.....		35.00
Maunabo.....		do.....		35.00
Do.....		do.....		55.00
Mayaguez.....		1 house and store.....	40,000.00	(1)
Do.....		do.....	52,000.00	(1)
Do.....		1 house.....		300.00
Do.....	43	1 theater.....		20,000.00
Moca.....		1 house.....		250.00
Patillas.....		1 hut.....		200.00
Ponce.....		Moving-picture films.....		6,000.00
Do.....		2 houses.....	1,000.00	1,000.00
Do.....		1 house.....	800.00	1,200.00
Do.....		do.....	1,000.00	1,000.00
Do.....		do.....		3,000.00
Do.....		1 theater.....	49,700.00	200.00
Do.....		2 houses and musical instruments.....		7,925.00
Do.....		1 tobacco factory and materials.....		89,600.00
Do.....		1 house.....	93,500.00	1,800.00
Do.....		1 shed.....	1,600.00	30.00
Do.....		1 stable.....		300.00
Do.....		1 hut.....		25.00
Quebradillas.....	2	do.....		50.00

¹ Amount not given.

TABLE IV.—*Number of fires which took place in Porto Rico during the fiscal year 1918-19, number of deaths caused thereby, number of and description of property destroyed or damaged, insurance carried, and the approximate amount of loss—Continued.*

District.	Death.	Property.	Insurance.	Approximate loss.
Rincon.....		1 house and store.....		2,750.00
Rio Grande.....		1 wharf.....		500.00
Rio Piedras.....		1 hut.....		50.00
Do.....		do.....		80.00
Do.....		2 houses.....	1,000.00	1,000.00
Sabana Grande.....		1 hut and 12 hundredweight corn.....		106.00
Do.....		1 house.....		500.00
Salinas.....		1 hut.....		50.00
Do.....		do.....		62.00
San Juan.....		1 shed.....		500.00
Do.....		2 railroad wagons.....		(¹)
Do.....		10 boxes gasoline.....		55.00
Do.....		1 garage.....	15,000.00	750.00
Do.....		1 house.....	9,500.00	25.00
Do.....		1 hut.....		100.00
Do.....		1 store.....	10,000.00	1,000.00
Do.....		do.....	10,000.00	500.00
San Lorenzo.....		1 shed.....		1,500.00
San Sebastian.....		1 house and 1 shed.....	1,500.00	2,500.00
Do.....		1 hut.....		40.00
Do.....		do.....		30.00
Santa Isabel.....		1 house and store.....		2,000.00
Do.....		1 warehouse and materials.....		1,500.00
Do.....		1 house.....		100.00
Toa Baja.....		do.....		50.00
Utumado.....		1 hut.....		30.00
Do.....		do.....		50.00
Vega Baja.....		do.....		60.00
Do.....		2 huts.....		181.00
Villaiba.....		3 houses.....		1,500.00
Do.....		1 hut.....		25.00
Yanco.....		do.....		25.00
Total.....	48		294,600.00	244,127.06

¹ Amount not given.TABLE V.—*Statement showing number of persons arrested for illicit traffic with alcohol, also giving number of stills and quantity of liquor seized.*

District.	Stills seized.	Persons arrested.	Quarts of alcoholic liquor seized.	Persons arrested.	Remarks.
Adjuntas.....	4	8	13½	1	2 sentenced and 7 acquitted.
Aguadilla.....	8	10	89½	10	14 sentenced and 6 acquitted.
Agua Buenas.....	1	1			1 case pending trial.
Albemito.....	2	2	54½	4	1 sentenced, 2 acquitted, and 3 pending.
Añasco.....	1	3	76½	2	1 sentenced, 1 acquitted, and 3 pending.
Arecibo.....	6	7	101	5	12 sentenced.
Arroyo.....	6	7	2½	2	3 sentenced, 3 acquitted, and 3 pending.
Barceloneta.....			3	1	1 sentenced.
Barros.....			½		No arrest.
Bayamon.....			45½	16	12 sentenced, 2 acquitted, and 2 pending.
Cabo Rojo.....			57½	3	1 sentenced and 2 pending.
Caguas.....	3	2	37	8	6 sentenced, 2 acquitted, and 2 pending.
Camuy.....	1	3			3 cases pending.
Carolina.....			5	7	7 sentenced.
Cayey.....	3	3	28½	14	12 sentenced, 3 acquitted, and 2 pending.
Ceiba.....	3	3	4½	3	4 sentenced and 2 cases pending.
Ciales.....	1	1	5		1 case pending trial.
Cedra.....			1	1	1 case pending.
Cerro.....	1	1			Do.
Cómaro.....			2½	3	1 sentenced, 1 acquitted, and 1 pending.
Derado.....	2	2	½	5	5 acquitted and 2 pending.

TABLE V.—*Statement showing number of persons arrested for illicit traffic with alcohol, also giving number of stills and quantity of liquor seized—Continued.*

District.	Stills seized.	Persons arrested.	Quarts of alcoholic liquor seized.	Persons arrested.	Remarks.
Fajardo.....	23	13	42	18	3 sentenced, 1 acquitted, and 27 pending.
Gusnica.....			27	2	2 sentenced.
Guayama.....	2	3	426	11	2 sentenced, 4 acquitted, and 8 pending.
Guayanilla.....			1	1	1 case pending trial.
Guaynabo.....	1	2	6½	1	2 sentenced and 1 pending.
Gurabo.....			1	2	2 sentenced.
Hatillo.....	1	1			1 sentenced.
Humacao.....	6	6	22	9	6 sentenced and 9 acquitted.
Jayuya.....			3	3	3 acquitted.
Juana Diaz.....	2	2			1 sentenced and 1 pending.
Juncos.....	5	5	22	7	1 sentenced, 7 acquitted, and 4 pending.
Lares.....	1	3	5		2 sentenced and 1 pending.
Las Marias.....	1	2			2 cases pending trial.
Las Piedras.....			3½	2	1 sentenced and 1 acquitted.
Luquillo.....	4	5		7	12 cases pending.
Manati.....			16½	8	4 sentenced, 2 acquitted, and 2 pending.
Maunabo.....	1	2	14	2	2 sentenced and 2 acquitted.
Mayaguez.....	4	5	197½	14	11 sentenced, 3 acquitted, and 5 pending.
Moca.....	1	1			1 acquitted.
Naguabo.....	4	5	21½	2	1 sentenced, 1 acquitted, and — pending.
Patillas.....	3	3	15	2	3 sentenced, 1 acquitted, and 1 pending.
Peñuelas.....					Liquor destroyed.
Ponce.....	25	20	151½	24	26 sentenced, 13 acquitted, and 5 pending.
Rio Piedras.....			65½	4	3 sentenced and 1 acquitted.
Sababa Grande.....				1	1 sentenced.
San German.....			10½	3	1 sentenced and 2 acquitted.
Salinas.....	6	19	3	5	24 cases pending.
San Juan.....	2		24½	19	13 sentenced, 1 acquitted, and 5 pending.
Santa Isabel.....	2	4			4 cases pending.
San Lorenzo.....			8	4	4 sentenced.
San Sebastian.....	1	2	36	4	5 sentenced and 1 pending.
Toa Baja.....				2	2 cases pending.
Utua.....				1	1 sentenced.
Vega Alta.....	1	1	2	1	2 sentenced.
Vega Baja.....			23	3	3 acquitted.
Vieques.....	4	4	19½	1	3 sentenced and 2 pending.
Villalba.....				1	1 pending.
Yabucoa.....	3	3	2½	6	7 sentenced and 2 pending.
Yauco.....	2	2	54½	7	5 sentenced and 4 acquitted.
Detective.....	19	19	886	30	38 sentenced, 8 acquitted, and 3 pending.
Total.....	167	185	3,113	292	

EXHIBIT D.

LIST OF FRANCHISE ORDINANCES PASSED BY THE PUBLIC SERVICE COMMISSION AND APPROVED BY THE GOVERNOR OF PORTO RICO.

An ordinance amending an ordinance entitled "An ordinance granting to Ramón Valdés, his heirs, successors, and assigns, the right to establish and operate a steam ferry service in the harbor of San Juan, between the towns of San Juan and Cataño." Approved July 19, 1918.

An ordinance repealing an ordinance entitled "An ordinance granting to Central San Cristobal and assigns the right to take and use 50 liters of water per second from the Rio Santiago, in the municipal district of Naguabo, for factory purposes." Approved September 17, 1918.

An ordinance granting a revocable permit to Conrado Zoa, Dagoberto and Nestor Rodriguez to take and use for irrigation purposes 13 liters of water per second from the Vegas River, in the municipality of Yauco. Approved October 18, 1918.

An ordinance repealing "An ordinance granting to Central Providencia & Compañía, its successors and assigns, the right to use 100 liters per second of the waters of the Rio Chico, for industrial purposes, in connection with its property situated in the municipality of Patillas." Approved December 5, 1918.

An ordinance amending an ordinance entitled "An ordinance granting a revocable permit to Fernández Hermanos to take and use, for industrial purposes 450 liters of water per second from the Las Vegas River." Approved December 5, 1918.

An ordinance granting a revocable permit to Vicente Quilichini to take and use for irrigation purposes, 53.82 liters of water per second from the Cruces River in the municipality of Sabana Grande. Approved January 21, 1919.

An ordinance granting to Charles Emile Pelletier a franchise to establish, maintain, and operate an aerial transportation service for passengers and freight around the Island of Porto Rico. Approved March 3, 1919.

An ordinance amending an ordinance entitled "An ordinance granting to Hernand Behn of San Juan, Porto Rico, and his heirs, executors, administrators and assigns, the right to construct, maintain and operate a system of long distance telephone lines to, and connecting the towns of Comerío, Barranquitas, Naranjitos, Barrios, Corozal, Ciales, Morovis, Utuado, Jayuya, Adjuntas, Moca, Laras, San Sebastián, Las Marías, Maricao, and Villalba, and the construction and operation of local exchanges in the said towns; and also granting the right to said grantee to acquire, operate and maintain hereunder the local and long-distance telephone lines and systems now owned by the Porto Rico General Telephone Co. and the South Porto Rico Telephone Co., respectively, and to construct, at Ponce, Porto Rico, a local exchange in accordance with the provisions of the terms of the franchise granted to the South Porto Rico Telephone Co. on September 25, 1913, and in accordance herewith." Approved March 3, 1919.

An ordinance granting to Primo Delgado authority to use 300 liters of water per second from the Vacas River, for the development of electric energy, and to construct, maintain and operate an electric plant and distributing system in Adjuntas. Approved May 26, 1919.

An ordinance granting to Sellés, Remos and Casal a revocable permit to take and use for industrial purposes 25 gallons of water per minute from the Rio Grande de Loiza in the municipality of San Lorenzo. Approved May 26, 1919.

An ordinance granting to R. Valcourt Questell authority to take water from the Flor de Lis Creek for furnishing water to the town of Aguas Buenas, and to maintain and operate a waterworks system already constructed by him. Approved May 27, 1919.

An ordinance granting to Vicente Martínez Reventos authority to use 400 liters of water per second from the Cialitos River, for generating electric energy, and to construct, maintain and operate an electric plant and distributing system in Ciales. Approved June 11, 1919.

EXHIBIT-E.

STATISTICAL DATA CONCERNING CIVIL SERVICE OPERATIONS DURING THE FISCAL YEAR 1918-19.

TABLE A.—Results of examination.

Examination.	Number of applicants.	Applications canceled.	Failed to report.	Pending.	Number examined.	Passed.	Failed.	Per cent passed.	Appointments.
Agricultural inspector, assistant.									11
Assessor and internal revenue agent ¹ .	50		6		44	31	13	70.45	5
Chainman ¹ .	5				5	1	4	20.00	
Chauffeur.	12	2		1	9	9		100.00	4
Chemist, assistant ¹ .									1
Chief, Bureau of Agriculture.	10				10	3	7	30.00	1
Civil engineer, assistant ¹ .	6				6	4	2	66.66	6
Clerk, first grade ¹ .	100		9		91	41	50	45.05	7
Do. ¹ .	7				7	5	2	71.42	
Clerk, second grade ¹ .	330		25		305	136	169	44.59	16
Do. ¹ .	5				5	2	3	40.00	
Clerk, third grade ¹ .	119	1	13		105	70	35	66.66	21
Do. ¹ .									
Clerk, statistical ¹ .	7				7	2	5	28.57	1
Clerk, visiting inspector boys' and girls' charity school ¹ .	1				1	1		100.00	
Collector of internal revenue ¹ .	25	1	5		19	2	17	10.52	1

¹ Written examination.

² Noncompetitive examination for promotion.

TABLE A.—Results of examination—Continued.

Examination.	Number of applicants.	Applications canceled.	Failed to report.	Pending.	Number examined.	Passed.	Filed.	Per cent passed.	Appointments.
Corral boss.....	2				2	2		100.00	1
Draftsman, architectural ¹	1				1	1		100.00	
Draftsman, junior, architectural ¹	6				6	3	3	50.00	1
Draftsman, apprentice architectural ¹	1				1	1		100.00	1
Draftsman, junior, topographical ¹	2	1			1	1		100.00	1
Engine driver (gasoline) ¹	6		1		5	1	4	20.00	
Engine driver (steam) ¹	4		1		3	1	2	33.33	3
Entomologist.....	1	1							
Examiner of accounts ¹	11	1			10	1	9	10.00	1
Horticulturist.....	4				4	4		100.00	1
Inspector, building construction ¹	6				6	2	4	33.33	2
Inspector, building construction assistant ¹	9				9	3	6	33.33	3
Inspector, public works ¹	5	1			4	2	2	50.00	2
Inspector, public works, assistant ¹	1				1	1		10.00	
Inspector, weights and measures ¹	11				11	3	8	27.27	2
Inspector, weights and measures ¹	8		1		7		7		
Internal revenue agents, tobacco expert ¹	1				1		1		1
Janitor.....	10				10	10		100.00	3
Labor inspector ¹	12		1		11		11		
Laboratory assistant ¹	1				1	1		100.00	
Leveler ¹	7				7	2	5	28.57	
Lineman.....	11				11	8	3	72.72	7
Master carpenter.....	7				7	7		100.00	1
Master mason.....	4				4	4		100.00	3
Master shoemaker.....	8				8	8		100.00	1
Master tailor.....	8				8	8		100.00	1
Mayordomo (overseer) experiment station.....	2				2	2		100.00	
Nurse.....	4				4	4		100.00	4
Overseer ¹	10		1		9	3	6	33.33	2
Overseer, assistant ¹	5		1		4	2	2	50.00	2
Police capataz ¹	10		1		9	4	5	44.44	1
Practicante.....	15				15	15		100.00	2
Prison guard ¹	33	1	2		30	17	13	56.66	14
Road foreman ¹	30		6		24	12	12	50.00	5
Rodman ¹	1				1	1		100.00	
Sanitary inspector ¹	85	9			76	17	59	22.36	13
Stenographer ¹	137	1	18		118	36	82	30.50	23
Surveyor ¹	3				3	3		100.00	1
Translator ¹	60	2	1		57	9	48	15.78	15
Telegrapher ¹	11	2			9	7	2	77.77	6
Telephone operator.....	5		1		4	2	2	50.00	1
Transitman ¹	1				1	1		100.00	
Typewriter ¹	106	5	7		94	51	43	54.25	7
Do. ¹	3				3	3		100.00	
Visiting physician.....	2				2	2		100.00	2
Total.....	1,347	28	100	1	1,218	572	646	46.96	211

¹ Written examination. ² Noncompetitive examination for promotion.

TABLE A-1.—Examinations held for the United States Civil Service.

FOR ORIGINAL APPOINTMENT IN PORTO RICO.

Examination.	Number examined.	Passed.	Failed.	Per cent passed.
Educational:				
First-grade English, customs service.....	54	31	23	57.40
Post office, clerk-carrier, Spanish.....	51	43	8	84.31
Post office, clerk-carrier, English.....	36	26	10	72.22
Subclerical, English.....	3	1	2	33.33
Subclerical, Spanish.....	20	11	9	55.00
Total.....	164	112	52	68.29

TABLE A-1.—*Results of examination—Continued.*FOR ORIGINAL APPOINTMENT TO POSITIONS IN THE UNITED STATES.¹

	Number of com- petitors.		Number of com- petitors.
Addressograph file clerk.....	2	Clerk, Railway Mail.....	1
Assistant observer, Weather Bureau.....	1	Entomological laboratory assistant.....	1
Clerk, bookkeeper.....	3	Immigrant inspector.....	1
Clerk to commercial attaché.....	1	Operator, calculating machine.....	1
Clerk, correspondence.....	1	Scientific assistant.....	1
Clerk, departmental.....	28	Special agent and research assistant.....	1
Clerk, minor.....	1	Stenographer and typewriter.....	19
Clerk, translator.....	3	Veterinarian.....	1
Clerk with knowledge of stenography and typewriting.....	1	Total.....	67

Total examined:

For original appointment in Porto Rico..... 164
 For original appointment to positions in the United States..... 67

In all..... 231

¹ The results of these examinations are not communicated to this commission.TABLE B.—*Changes in the Porto Rican civil service during the fiscal year ending June 30, 1919.*

[C.—classified; U.—unclassified.]

Character of change.	Governor.		Police.		Secre- tary.	Justice.		Finance.		Auditor.		Interior.	
	U.	C.	U.	C.	C.	U.	C.	U.	C.	U.	C.	U.	C.
Probational and original ap- pointments.....	1		190	1	6	64	32	1	18	1	3	128	75
Appointments from United States registers.....							1						
Reinstatements.....						1	18		16		2	5	28
Transfers.....				2	3		5		16	1	5		11
Promotions.....	1	22	3		16	11	19		87		32	29	174
Reductions.....						1	4					6	8
Separations.....	1	186			10	41	75		35		5	122	95
Temporary employment:													
Appointments.....	1			2	12	31	105		17		5	64	168
Separations.....					5	22	77		7		2	42	97
Total.....	2	2	396	8	52	171	336	1	196	2	54	396	656

Character of change.	Educa- tion.		Agricul- ture and labor.		Civil service.	Health.		Univer- sity.	Insular library.	Total.		
	U.	C.	U.	C.	C.	U.	C.	U.	C.	U.	C.	Both.
Probational and original ap- pointments.....	598	3	3	10	2	157	50	22		1,175	200	1,375
Appointments from United States registers.....				2							3	3
Transfers from United States civil service.....				3							3	3
Reinstatements.....	362	4		1		11	6		1	374	81	455
Transfers.....		19		3	2	4	8			9	70	79
Promotions.....	340	6		6		49	65	31	3	482	412	894
Reductions.....	44					9	5			60	17	77
Separations.....	659	10	1	14	2	148	52	28	3	1,185	302	1,487
Temporary employment:												
Appointments.....				25	3	316			2	96	655	751
Separations.....				3	4	231			2	64	428	492
Total.....	2,003	42	4	67	13	363	734	105	11	3,445	2,171	5,616

TABLE C.—*Distribution of positions in the Puerto Rican civil service, by department, salary, nationality, and classification.*
 [Non-N = nonnative, P = native, C = classified service, U = unclassified service.]

Salary of position (dollars.)	Governor			Police			Executive secretary			Justice			Finance			Auditor			Interior			Education		
	Non-N	P	C	Non-N	P	C	Non-N	P	C	Non-N	P	C	Non-N	P	C	Non-N	P	C	Non-N	P	C	Non-N	P	C
10,000.....			1																					
9,500.....																								
9,000.....																								
8,500.....																								
8,000.....																								
7,500.....																								
7,000.....																								
6,500.....																								
6,000.....																								
5,500.....																								
5,000.....																								
4,500.....																								
4,000.....																								
3,500.....																								
3,000.....																								
2,500.....																								
2,000.....																								
1,500.....																								
1,000.....																								
900.....																								
800.....																								
700.....																								
600.....																								
500.....																								
400.....																								
300.....																								
200.....																								
100.....																								
0.....																								

TABLE C.—Distribution of positions in the Porto Rican civil service, by department, salary, nationality, and classification—Continued.

Salary of position (dollars.)	Governor.			Police.			Executive secretary.			Justice.			Finance.			Auditor.			Interior.			Irrigation.				
	Non-N.			Non-N.			Non-N.			Non-N.			Non-N.			Non-N.			Non-N.			Non-N.				
	P.			P.			P.			P.			P.			P.			P.			P.				
	C.	U.	P.	C.	U.	P.	C.	U.	P.	C.	U.	P.	C.	U.	P.	C.	U.	P.	C.	U.	P.	C.	U.			
487.....																										
460.....																										
400.....																										
320.....																										
300.....																										
275.....																										
260.....																										
240.....																										
225.....																										
200.....																										
185.....																										
187.....																										
180.....																										
170.....																										
160.....																										
144.....																										
120.....																										
100.....																										
96.....																										
Total.....	2	2	1	1	1	3	713	3	56	2	5	8	248	192	7	179	10	5	3	40	7	387	74	1	3	44

REPORT OF THE GOVERNOR OF PORTO RICO.

[illegible]

TABLE D.—*Distribution of positions and salaries in classified and unclassified service based on appropriations, fiscal year 1919-20.*

Branch of the service.	Classified service.			Unclassified service.			Total.		
	Total salaries.	Positions.	Average salary.	Total salaries.	Positions.	Average salary.	Total salaries.	Positions.	Average salary.
Senate.....				\$29,580	30	\$986	\$29,580	30	\$986
House of representatives.....				40,670	49	830	40,670	49	830
Governor.....	\$1,125	2	\$562	14,600	3	4,866	15,725	5	3,241
Police.....	9,374	8	1,171	501,247	714	702	510,621	722	707
Executive secretary.....	78,731	59	1,332	7,000	2	3,500	85,731	61	1,405
Justice.....	301,106	253	1,190	190,750	200	952	491,856	453	1,085
Department of finance.....	223,343	186	1,200	12,700	10	1,270	236,043	196	1,204
Auditor.....	70,312	45	1,562	10,159	3	3,383	80,472	48	1,673
Interior department.....	353,712	391	897	21,932	77	286	375,644	468	802
Interior irrigation service.....				9,900	3	3,300	48,000	48	1,000
Education.....	38,100	45	846	2,111,015	3,220	655	2,149,115	3,265	660
University.....	27,315	19	1,437	98,696	75	1,315	125,991	94	1,335
Carnegie Library.....	8,709	9	967				8,709	9	967
Agriculture and labor.....	102,586	74	1,386	9,250	4	2,312	111,836	78	1,423
Civil service commission.....	3,744	4	936	3,300	3	1,100	7,044	7	1,066
Health department.....	268,200	300	894	44,781	139	324	312,981	439	711
San Juan Harbor board.....				11,585	6	1,930	11,585	6	1,930
Institute of Tropical Medicine.....				20,080	13	1,533	20,080	13	1,533
Public service commission.....	6,645	4	1,661	3,800	3	1,266	10,445	7	1,492
Total.....	1,493,002	1,400	1,066	3,140,166	4,553	689	4,633,168	5,953	779

TABLE E.—*Showing number of positions and total salaries of native and non-native officers and employees.*

Branch of the service.	Natives.			Non-natives.		
	Total salaries.	Number employed.	Average salary.	Total salaries.	Number employed.	Average salary.
Senate.....	\$29,580	30	\$986			
House of representatives.....	40,670	49	830			
Governor.....	3,625	3	1,208	\$12,100	2	\$6,050
Police.....	507,021	721	702	3,600	1	3,600
Executive secretary.....	80,156	58	1,382	5,575	3	1,858
Justice.....	453,746	440	1,033	32,910	13	2,531
Finance department.....	223,153	189	1,191	10,890	7	1,555
Auditor.....	59,542	40	1,488	20,950	8	2,618
Interior department.....	361,974	461	785	13,670	7	1,953
Interior irrigation service.....	38,100	44	866	9,900	4	2,475
Education.....	2,006,595	3,120	643	131,735	119	1,106
University.....	33,476	42	796	60,220	33	1,824
Carnegie Library.....	7,389	8	923	1,320	1	1,320
Agriculture and labor.....	99,676	72	1,384	12,160	6	2,026
Civil service commission.....	4,344	6	724	2,700	1	2,700
Health department.....	310,553	437		1,728	2	864
San Juan Harbor board.....	8,285	5	1,657	3,300	1	3,300
Institute of Tropical Medicine.....	20,080	13	1,533			
Public service commission.....	10,445	7	1,492			
Total.....	4,310,410	5,745	750	322,758	208	1,551

APPENDIX II.

REPORT OF THE EXECUTIVE SECRETARY OF PORTO RICO.

OFFICE OF THE EXECUTIVE SECRETARY,
San Juan, P. R., August 20, 1919.

SIR: I have the honor to submit my annual report, covering the period from July 1, 1918, to June 30, 1919.

REVIEW OF PROGRESS MADE IN THE DIFFERENT ACTIVITIES UNDER THE JURISDICTION OF THIS OFFICE DURING THE TWO DECADES OF AMERICAN ADMINISTRATION IN PORTO RICO.

Besides the duties imposed upon this office in connection with its secretarial work for the chief executive of the insular government, there are some other important functions assigned by law to it, such as the registration of corporations, domestic and foreign; the registration of trade-marks; the execution of the game law; the inspection of weights and measures used in industrial and commercial transactions; and the furnishing of supplies, printed matter and automobile transportation to each and every department, bureau, or office of the insular government.

Corporations.—The organization of corporations or any other kind of commercial companies was made at the time of the American occupation in accordance with the provisions of the Code of Commerce. Their registration was compulsory and had to be made in the commercial registry kept for the purpose in the offices of the registrars of property. The Spanish law on this subject was, in its fundamental principles, same as the American law now in force, although in matters of detail and procedure the former was more extensive than the latter.

The United States Congress provided for a temporary civil government for this island in 1900, and the work of adaptation of the Porto Rican legislation to the American institutions and principles was promptly begun. In carrying out said work, a law was approved during the first session of the first legislative assembly of Porto Rico regulating the admission of foreign corporations to do business in this country, and another law was approved during the second session of the same legislature providing for the organization of private domestic corporations. The registration of both was then transferred by law to this office.

Our private corporation law was copied from the law of the State of New Jersey on the subject, as New Jersey was considered at the time of its enactment as the leading State in corporate legislation. It was, of course, a general business corporation law, and was at first intended to cover every class of mercantile and industrial enterprise, with the exception of banks, insurance companies and public service corporations. Apparently, the intention of the law makers was to provide for the organization of the excepted companies under separate and special laws in which specific provisions might be inserted for the protection of the public, but for one reason or other said intention has never crystallized. In the year 1911, the business corporation act was reenacted especially for the purpose of removing it from the Civil Code and putting it as a separate statute. At this time, the organization of public service companies was authorized under said act on condition that all such corporations shall be subject to effective regulation and that their charters shall provide that they are subject to amendment, alteration or repeal by the legislature. In 1912, in view of certain difficulties encountered for the passage of a banking law, the organization of banks and insurance companies was authorized under the general corporation act, provided that its articles of incorporation should previously receive the sanction of both the executive council and the governor. The intervention of these two governmental agencies was established for the purpose of having a mean through which proper clauses might be inserted in the articles of incorporation to safeguard the large interests that the people in general have in this kind of semipublic institutions. From time to time, the law has been amended to keep it abreast with the changes of time and the successive modifications made to it in the State where it was originated.

Under the American system, the development of the business corporation idea has had a marvelous progress. To realize this it would suffice to compare the following two facts: as far as the records I have been able to consult show, at the time of the change of sovereignty there were about 14 corporations organized and in existence in Porto Rico, classified as regards their main purposes, as follows: Banking, 6; electric plants, 2; common carriers, 2; sale of provisions, 2; manufacture and sale of bread, 1; and publication of a newspaper, 1. On June 30, 1919, there were 236 domestic corporations doing business as follows: agricultural, 89; mercantile, 35; transportation, 21; printing, 14; banking, 11; conducting theatres or motion-picture shows, 10; construction, 10; manufacturing, 8; drugs business, 8; electric plants, 8; brewing and distilling, 4; wood working, 3; mining, 2; and several other miscellaneous businesses, 13; and 150 foreign corporations, as follows: agricultural, 65; insurance, 26; manufacturing, 10; transportation, 7; banking, 5; land development, 4; mercantile, 4; motion-picture exchanges, 4; meat packing, 3; surety, 3; construction, 3; marketing petroleum, 2; mining, 2; operating docks and wharves, 2; and several other miscellaneous businesses, 10. However, it is only fair to state that such a progress is not solely due to the liberal policy upon which the provisions of our present corporation law are formulated, but it is due as well to some other factors, such as, for instance, the influence of the huge impetus characteristically imparted to every kind of business enterprise by the American people; the immense financial resources of the new sovereign nation which have made possible the application of a part of them to the development of our agricultural, commercial and industrial life; and a more clear comprehension of what the corporate idea means by which the spirit of cooperation and association is constantly increasing among the native people, who are not now so reluctant as they were before to put their resources and activities together to promote any form of industry; and thus secure the strength and efficiency that none of them, individually, could possibly obtain.

Trade-marks.—A more radical change has been made in the legislation for the protection of property rights upon trade-marks. The Spanish law, which was in force in Porto Rico until the year 1902, was based on what is called the attributive system, in which the acquisition of the ownership of a trade-mark is secured only by the registration thereof with the proper official of the government. Under such a system a trade-mark could be registered whether or not it had been placed on the market with the goods, as the rights of ownership over a mark were derived from priority in invention and registration and not from priority in use.

Our present trade-mark law, which was approved in 1902, is on the contrary based on the principles of the declaratory system which was recognized in the common law and is now prevailing in the United States and in many other countries. Under such a system priority in use is absolutely necessary to obtain any right of property upon a trade-mark, and registration simply provides an additional means to prove the existence of said right. That is the reason why our law prescribes that only such trade-marks as are used in commerce in Porto Rico may be registered. As the American Jurisprudence says: "A trade-mark right can be acquired only by actual use of the word or mark in the manner that trade-marks may be used." Priority in use, therefore, is superior to priority in registration, and as a natural consequence of this system registration is not essential to assert the rights of property upon a trade-mark whenever priority in use may be clearly established.

There is an increasing tendency to adopt the declaratory system in those countries in which the attributive system is still followed, as the former offers a better protection to the bona fide owners of unregistered trade-marks against fraudulent imitations by unscrupulous competitors, and Porto Rico, in making the change 17 years ago, kept also on this subject abreast with the evolutive progress of the world.

Hunting.—There was also a game law in force in Porto Rico when the treaty of Paris of 1898 was ratified and the transfer of the island to the United States was legally made. But it appears that its provisions were never enforced after the American occupation, surely because it was considered as a law of privilege, a law whereby the King of Spain had prescribed, in the exercise of his sovereign powers, the manner in which the people residing in his dominions could secure their rights to kill game.

With the change of nationality, the title to all wild game in Porto Rico was transferred to the people of this Territory in their sovereign capacity, and it was but natural to wait until the representatives of the new sovereignty should have been willing to regulate the use by the people of their hunting rights. Due to the lack of a game law, our stock of wild birds was being unduly depleted and threatened with rapid extermination; but in the legislature of 1916 the present law was enacted, and its provisions, if a proper vigilance is maintained by the police to denounce every transgression thereof, would undoubtedly serve to secure their principal purpose: the preservation of the game, and especially the protection of birds useful to agriculture.

Weights and measures.—The weights and measures inspection service under the Spanish régime was carried on in accordance with the provisions of a law of July 19, 1849, made applicable to the islands of Cuba and Porto Rico by a royal decree dated April 22, 1882. The decimal metric system was obligatory in 1899 in all the dominions of the Spanish Kingdom, and for the purpose of testing and sealing the instruments used in the commercial and industrial transactions the island was divided into four districts and an inspector assigned to each district.

These district inspectors did not receive any salary, but they were allowed to collect certain fees from the merchants whose weights and measures they tested and sealed. The merchants were obliged to carry their instruments to the office of the inspector or to a place previously designated when the inspector was working out of the municipality in which he resided. Still, at the request of the interested parties, the tests could be made in their stores, but in that case the inspectors were entitled to collect twice the fees assigned to them by the regulations. The inspectors had only the duty of visiting the capitals of the judicial districts, and all the merchants of each district had to send their weights and measures both for original and for periodical tests to their respective capital upon a date fixed by the governor. For an inspector to go to any other municipality, the merchants had to defray all the expenses incident to the trip.

The vigilance upon unscrupulous merchants was exclusively left to the municipal authorities or to their agents, and it was only nominal. The merchants, generally, acquired a complete set of metric weights and measures, and after having them officially tested, kept them only for presentation to the public officers when they were required to do so, which seldom happened, and used in their daily transactions the old illegal and, frequently, fraudulent instruments.

As I have stated, the use of the metric system of weights and measures was compulsory, and no other system could legally be employed. But the law on the matter was never strictly enforced, in spite of the fact that the government of the island published a decree at the end of the year 1887, advising the people that, after January 1, 1888, only the metric weights and measures was going to be permitted. Nevertheless, custom had more influence upon the people than the law, and both the merchants and the public stuck to the old system of pounds, pints, and yards, in making their verbal daily transactions, and only used the decimal metric system in operations to be carried out in writing.

Such was the situation prevailing when the United States took possession of Porto Rico and put the island temporarily under a military government. This government, a short time after its inauguration, made a praiseworthy effort to protect the small purchasers against the employment of short weights and measures by certain retail dealers, but said effort was of no avail, as the new regulations promulgated on March 18, 1899, imposed upon certain municipal commissions, designated by the mayors, the primary duty of seeing that the new rules were complied with, and failed to provide sufficient and competent personnel from the central government to watch and inspect the work done by the local commissions.

The result was therefore a complete failure, and it is only fair to recognize that it was also as difficult as before to enforce the decimal metric system under the new government, in view of the fact that the system of weights and measures more in vogue in the United States was the imperial or English system of yards, pounds, gallons, etc., and almost everything imported from the mainland was weighed or measured in accordance with the units of the imperial system, also more agreeable to the people as it was similar to the Spanish weights and measures that they had been using for centuries.

After the organization of the civil régime, a bill to provide for a mixed system of weights and measures was introduced successively in several legislatures, but failed of passage. However, at the special session held by the Legislative Assembly in the year 1913, due to numerous protests of the people and also to a strong appeal made by the governor to the law-making body urging them to give to the consumers the protection they greatly needed against the dishonest methods of certain merchants, the law now in force was enacted.

By this law the metric system, which is considered as the most scientific one, and the imperial system, which is the one customarily used in the United States, were both recognized in Porto Rico, and a central bureau was created to take care of the execution of the law and the regulations issued thereunder, and in addition to the chief inspector and the assistant chief inspector, six district inspectors were provided for. Furthermore, the mayor, or one of his subordinates deputized by him for the purpose, was charged with the duty of seeing that the law was complied with within his municipality, and the same duty was also imposed upon the insular police force throughout the island.

Most of the work of inspection is, of course, performed by the district inspectors who are paid by the insular government. They visit the stores of each municipality at least once a year, not only in the urban zone but even in the remotest rural barrios. As a rule, the municipal inspectors limit their sphere of action to the urban zone. No charge is made to the merchants for the testing or retesting of their instruments. A constant vigilance is kept over the weighing and measuring daily transactions to protect the people against fraud and illegal practices, and violations of the law are immediately brought before the proper court and the lawbreakers promptly punished.

The organization of this service under the new law was accomplished with the valuable cooperation and help of the national bureau of standards, which bureau detailed for the purpose one of its most able physicists, and the work was at the beginning and has been thereafter so efficiently done that I consider that the progress made by Porto Rico in this branch of the government service is really extraordinary.

Furnishing supplies, printed matter, and transportation for official use.—Important changes have been made since 1899 in the methods of securing supplies, printed matter, and transportation for official business. In the Spanish times, the furnishing of materials and transportation to civil officers was made either by direct contracts or through public calls for bids, but, as far as I can remember, there was never a central agency or storehouse in charge of such services.

Now these businesses of the insular government are being conducted on a modern basis, and all of them are placed under the control of the bureau of supplies, printing, and transportation, a central organization the development of which has been slowly but steadily pursued during the last 20 years.

A government printing plant was the first thing attained in this direction. It was promptly established after the inauguration of the civil régime provided for in the Foraker Act, and has been constantly improved, so that to-day it is one of the best plants in Porto Rico, and the printing work done therein is rapidly and economically performed and is entirely satisfactory in every respect. In connection with this plant, a small supply service was maintained for the purchase and distribution of stationery and other equipment to such officials of the government as were willing to send their requisitions to the bureau of printing and supply. At that time this bureau was under the jurisdiction of the auditor's office.

On April 1, 1905, the governor transferred it to the department of the secretary of Porto Rico, pursuant to the authority vested in him by the appropriation act for 1905-06.

Notwithstanding the existence of said bureau and the purpose for which it was maintained, up to the end of the year 1909 most of the supplies and material for official use was purchased directly by the departments, and the amount of business transacted by the bureau was relatively small, although increasing from year to year.

It was evident that the practice then followed was inefficient and that economy, uniformity, and good business principles required centralization of the service and modern methods of procedure in order to facilitate the acquisition and distribution of supplies of every kind and to succeed in fully realizing the end in view when the bureau was first organized.

Accordingly, Gov. Colton issued his executive order of December 27, 1909, providing that all equipment, furniture, printing, stationery, materials, and supplies for official use had to be obtained through the bureau of printing and supply and establishing adequate rules for the purchase and delivery of such supplies.

This executive order gave a great impulse to the business of the bureau. Its operations were then placed upon the basis of a modern commercial organization, and by securing the help and services of the purchasing agent in New York and the disbursing agent in Washington of the Bureau of Insular Affairs, War Department, the bureau gained the advantage of being in a better position to make purchases in the United States at the best prices obtainable.

On February 1, 1910, a new executive order made an important addition to the business of the bureau. A transportation division was created and attached to it, for the purpose of furnishing automobile transportation to officers of the government for official travels, and all the government cars then in existence were put under the control and charge of said division. Also a repair shop, completely equipped, and a good garage were installed. This was a remarkable improvement to place the transportation service on a more efficient and economical basis.

No legislative action had ever been taken to specifically authorize the organization of said bureau, in the manner in which it was then being operated, but the results obtained by the decision of the governor were so excellent that the legislature created in the year 1910 a "working capital fund" of \$10,000 for the operations of the bureau and increased it in the appropriation act for 1911-12 to \$25,000.

Until the end of the fiscal year 1915-16 the bureau was placed upon a self-supporting basis, paying its current expenses out of a surcharge on the cost of supplies or the value of services rendered, which surcharge was first of 10 per cent and later successively reduced to 7½ per cent and 7 per cent. At last, in the regular session of the legislature of 1916 a law was approved establishing the present bureau of supplies, printing, and transportation as a central purchasing agency and a central government storehouse under the jurisdiction of the secretary of Porto Rico, and creating a supply committee with the same officer as ex officio chairman, with authority to make, only with a few exceptions, all purchases of the supplies necessary for the transaction of the official business. The legislature made at the same time specific appropriations for the personnel and the contingent expenses of the bureau and provided that no surcharge whatsoever was to be made for the purchase and delivery of materials and supplies. Only a surcharge of not to exceed 10 per cent in the printing division and of not to exceed 20 per cent in the transportation division was allowed, to replace machinery and permanent equipment.

ANNUAL REPORT.

Legislation.—Two great calamities fell upon the island during the second half of the calendar year of 1918: One of them in the form of a terrible epidemic of influenza which spread quickly all over the island, the number of persons attacked by the disease, which increased rapidly from day to day, varying from 40,000 to 50,000; and the other one in the form of the great earthquake shocks of October 11, followed by a series of smaller shocks which produced considerable damage, especially in the cities and towns of the western coast.

The situation created by the epidemic became so acute and alarming that the governor deemed it necessary to call a special session of the legislature to consider and take action on this important matter, principally through the appropriation of a large amount of money to meet the heavy expenditures necessary to fight out and eradicate the dreadful disease. At the same time he requested from the law-making bodies to adopt, among others of less importance, such measures as would better serve for the relief of the municipalities and the people that had suffered on account of the earthquakes.

The legislature convened on the date set in the call—November 26, 1918—and when it adjourned on December 7 of the same year, eight acts, four joint resolutions and one concurrent resolution had been adopted, which are now on file in this office as laws of Porto Rico.

The second regular session of the ninth legislature began on February 10, 1919, and was still going on by the end of the fiscal year, thus establishing a record of length, as no previous session had ever lasted for so long a period of time. Up to June 30, there had been received in this office 79 acts and 36 joint resolutions passed by the legislature and approved by the governor and two bills that became laws without such approval, and 17 bills had been vetoed. Some of them were modified by the legislators to meet the objections of the governor, who approved them when resubmitted to his consideration, and others failed as it was not possible to secure the vote of two-thirds of the members of each House to pass them over the governor's veto.

The following legislation connected with the duties of the undersigned has been enacted at this regular session: (1) An act to amend section 5 of "An act to regulate the practice of the notarial profession in Porto Rico," approved March 8, 1906, and for other purposes. (2) An act to amend sections 1 and 16 of "An act to establish standard systems of weights and measures; to regulate the purchase and sale of commodities and the ascertainment of weights and measures in industrial and commercial transactions and to prevent fraud therein, and for other purposes," approved August 13, 1913. (3) An act providing that in making purchases of furniture, articles and supplies for the departments and offices of the insular government, as well as for municipalities, school boards, or any other public body, preference shall be given to furniture, articles, and supplies manufactured or produced in the country, and further providing that notice shall be given certain manufacturers of such articles, and for other purposes. (4) An act to establish legal units of measure for gas and electricity; to create an inspection service of electric, gas, and water meters under the jurisdiction of the bureau of weights and measures; to authorize the executive secretary of Porto Rico to regulate the said service; to appropriate the necessary funds therefor, and for other purposes. (5) An act to create the Historical Archive of Porto Rico. (6) An act to establish the law of registrations and elections. And (7) A joint resolution to dissolve certain domestic corporations and associations.

The necessity for and the purposes of most of the above-mentioned laws will be explained in the respective subdivisions of this report concerning the subject matters to which they refer. I desire, however, to state here that in the enactment of the new

registration and election law, I successfully worked for the insertion therein of the same provisions as were included in the joint resolution of April 12, 1917, for the determination of the regular candidates of the political parties, in cases in which the names of more than one candidate for the same office were presented; for a clear and absolute prohibition as to the use by any party of names and devices, or parts thereof, already chosen by some other party; and for the necessary guaranties as to the authenticity of the signatures in the petitions for nomination of candidates made by new political organizations, as well as in the letters of acceptance or resignation of the candidates. Surely, by inadvertence, in drafting the new election law, which was going to supersede all previous legislation on the matter, these provisions of the above-mentioned joint resolution were omitted, and it was very important to have them reenacted, so as to avoid in the future the same source of difficulties that this office had experienced in the past.

Publications.—During the fiscal year the manuscripts of two small pamphlets of laws passed by the legislature, and nine administrative bulletins containing governor's proclamations, were prepared, printed, and distributed.

One of the pamphlets contains 56 pages and comprises the laws of the second special session held by the legislature in 1918. The other was a pamphlet of 38 pages, and its publication was due to the following facts: As stated in my last annual report, 11 bills and joint resolutions passed at the first regular session of the ninth legislature were not signed by the governor, and it was then considered that they did not become laws, because their return to the legislature was prevented by the adjournment of said body before the expiration of the legal period for their return after their presentation to the governor.

The legislature, however, contended that they had not adjourned *sine die* on November 26, 1917, but had taken a recess of two and a half months, or until a fixed day; the governor, on the contrary, being of the opinion that the action taken by the legislature was to be considered as a final adjournment, as the organic act did not give them the power to continue in session throughout the two years of its existence, by means of long and repeated recesses.

A controversy thus arose between the legislature and the governor in which several features of the fundamental law of the island, such as the governor's "pocket veto," the governor's power to make recess appointments, etc., were taken up. In connection with the 11 bills above referred to, their validity as laws of Porto Rico was to depend upon the final determination of the principal point in dispute, to wit, whether or not the legislature had definitely adjourned on November 26. If it had so adjourned, said bills could not have become laws under the "pocket veto" clause of the organic act, as the governor's signature was not affixed to them within 30 days after receipt by him; if the legislature had simply taken a recess, then the bills in question would have become laws under another provision of the organic act requiring the governor, in case of disapproval of a bill, to return the same to the legislature with his objections within a term of 10 days.

A test case was prepared, and the initial step taken in connection therewith was to file in the Supreme Court of Porto Rico, on behalf of the municipality of Quebradillas, a petition for a writ of mandamus against the undersigned to secure the promulgation as a law of Porto Rico, of one of such bills providing for the maintenance of an artesian well in the said municipality.

After the case was properly argued, the attorney general acting as the representative of this office, the supreme court handed down its decision on March 11, 1919, and issued a preemptory writ of mandamus against the executive secretary to promulgate and publish said act, same being effective, although not signed by the governor. The opinion of the court was delivered by Associate Justice Aldrey, and agreed to by the chief justice and two more justices, and held that the organic act fixes no limit for the duration of a regular session, and that therefore it was the express intention of the United States Congress that the Porto Rican Legislature might continue in regular session for more than 90 days, and thus the legislators were empowered to adjourn to the first Monday in February—as they did—if they considered such adjournment beneficial to public interests.

Associate Justice Wolf dissented on the ground that the return of a bill by the governor with his objections is to be made to the house in which the bill originated while said house is in actual open session, and that the bill in controversy had failed because by the adjournment of the legislature the governor did not have the specified number of legislative days granted to him by law within which to make the return. Furthermore, that the adjournment in this case was rather in the nature of a final adjournment than in the nature of an ordinary recess, and that if it were considered otherwise the appointing power of the governor would be paralyzed, as he would be prevented from making any appointment for a long period, and also he would be prevented from the possibility of calling a special session of the legislature.

The mandate of the supreme court was promptly complied with by this office, and not only the act selected for the test case but all those in a similar condition were officially promulgated and published.

At the close of the fiscal year we were proceeding with the printing of the volume of laws passed at the regular session of 1919, of which those that took effect immediately and those of greater importance were printed in advance loose sheets for distribution without delay to public officers and interested persons.

The proceeds from the sale of volumes of the compilation and of the session laws during the fiscal year amounted to \$795.20.

Passports.—From July 1, 1918, to June 30, 1919, 1,421 passports were issued for the following countries:

For the Dominican Republic.....	829
For Cuba.....	383
For Spain.....	79
For Venezuela.....	69
For Panama.....	23
For Haiti.....	9
For Nicaragua.....	7
For the Island of Curaçao, Dutch West Indies.....	5
For the Argentine Republic.....	4
For Mexico.....	3
For England.....	2
For British West Indies.....	2
For Colombia.....	2
For France.....	1
For Belgium.....	1
For Peru.....	1
For Guadeloupe, French West Indies.....	1
Total.....	1,421

There has been a decrease of about 12½ per cent in the number of passports issued as compared with the fiscal year 1917-18, which decrease is primarily due to the use of identification cards, instead of passports, for travel between Porto Rico and Santo Domingo.

This system of identification cards was established on February 3, 1919. As the war was practically over, it was necessary to find some means of facilitating the movement of passengers to and from the neighboring island. Specially a great number of difficulties existed for compliance by our laborers and their families with all the requirements of the rigid regulations established by the State Department during the war, and these difficulties were hampering the emigration of our surplus population to the near-by country. To find a remedy to this situation the matter was taken up with the proper officials at Washington, and the Department of State gave authorization to the commissioner of immigration of Porto Rico for the issuance of identity cards to American citizens for insular travel, as an emergency measure designed to obviate the delay necessary in going through the formalities required for obtaining a passport.

Two months later it was known that the identity cards were being taken away from the holders thereof at Santo Domingo, thus leaving them, contrary to the purposes for which the cards were issued, without any document for their return to Porto Rico. This fact was also submitted to the authorities at Washington, and the State Department cabled to the American legation at the Dominican Republic to use its good offices with the military government of said country, in order that the cards were left in the possession of the holders.

Another cause for the decrease of passports granted during the year was the restriction placed upon travel to Panama of relatives of the soldiers of the Porto Rican regiment, then rendering services at the Canal Zone. Information was received that no housing facilities existed there for the accommodation of the soldiers' families, who were living at Panama and other towns of the Republic in a very poor and anti-hygienic condition, at a considerable cost, and who were exposed to be left without resources at a foreign soil if the regiment were ordered to some other place for duty. In view of these circumstances, the governor decided not to issue passports for Panama to soldiers' relatives except upon authorization of the proper military authorities.

Special care was taken by this office to prevent that men of military age might go to a foreign country without a permit of his local military board until advice was received, after the signing of the armistice, that such permits were no longer necessary. Definite instructions were also asked and received from the Department of State as to the issuance of passports to men comprised within the terms of the act of Congress extending the military age from 18 to 45 years.

Applications for passports submitted by persons whose permanent residence was in the United States, or those for travel to Cuba en route to the mainland in order to avoid the submarine danger, or for travel to Europe, were submitted by cable to State

Department for authorization. In connection with the latter, instructions were received to the effect that passports to European countries were not issued except in cases of most urgent necessity, and therefore it was necessary for this office to examine carefully the evidence presented by applicants and to make in certain cases investigations through the police as to their conduct and the real purposes of their trips before submitting the matter to Washington.

On April 12, 1919, the governor was authorized, in his discretion, to issue passports for travel to Spain and Latin American countries, Mexico excepted. Passports for Spain were to be granted only for travel by direct route and in those cases in which there was documentary evidence showing that the trips were urgently necessary.

Passports for Mexico were not to be and are not yet issued for the entire country, on account of the revolutionary movements existing in certain regions thereof, and of course they can not be granted without securing the previous authorization of the Department of State.

A number of applications were denied during the fiscal year for several reasons, such as the failure to overcome the presumption of expatriation under the act of Congress of March 2, 1907; the failure to comply with the provisions of section 5 of the new organic act of Porto Rico, in the case of applicants born in this island of French and other alien parents; the failure to present clear evidence of American citizenship in instances in which the applicants were persons born outside the United States or Porto Rico, and so forth.

Some cases in which the American citizenship of the applicants was doubtful were carefully studied and disposed of in accordance with previous decisions rendered by the Department of State or submitted to said department for its consideration and final settlement.

There were two very important cases among them. One was the application made by Mr. Pedro Brull, a Spanish subject, for a passport for his six minor children, running from 7 months to 15 years old, to go to Spain, where Mr. Brull was moving with his family. The other was the application made by Mrs. Carmen Maria Murier de Leon for a passport for two minor children, of 12 and 10 years of age, respectively, to go to Santo Domingo to join their father, Mr. Octavio Mella, a Dominican citizen.

The two petitions were based on the fact that all these children were natives of Porto Rico, and on the presumption that the Federal law providing that all persons born in the United States are citizens of the United States was applicable, and, consequently, that any person born in Porto Rico after the American occupation was to be considered as born in the United States for the purpose of said law.

After due consideration, this office reached the conclusion that neither Mr. Brull's children nor Mr. Mella's children were citizens of the United States. In the opinion of the undersigned the Federal law in question was not applicable to Porto Rico, and the only law controlling these two cases was the organic act of Porto Rico, in which the United States Congress, giving complete recognition to the principle of international law that minors follow the nationality of their parents, granted to any person born in Porto Rico of an alien parent, and permanently residing in this island, the privilege of becoming an American citizen by simply making a sworn declaration of allegiance to the United States before the United States District Court for Porto Rico upon reaching his or her majority, or within one year thereafter. (See last proviso of section 5 of said act.) The case of Mr. Brull's children was really more complicated, as under the stipulations of the treaty of Paris only Spanish subjects born in the Spanish Peninsula were entitled to preserve their allegiance to the Crown of Spain, and the Department of State had held that the children born in Porto Rico of such Spanish subjects were not so entitled, and that Congress had made them, first citizens of Porto Rico in accordance with the provisions of the Foraker Act, and then citizens of the United States under the Jones Act.

Although in my judgment the provisions of article 9 of the treaty of Paris could only be applicable to subjects of Spain who were residents of Porto Rico at the time of its ratification, and not to the children born in Porto Rico, subsequent to said ratification, of Spanish parents, who should be placed on the same level with other alien parents mentioned in the above-cited proviso of our present organic act, still it was considered advisable to submit the matter to the Department of State in order to secure a definite rule for the treatment of similar cases in the future. At the end of the fiscal year this question was still undecided.

Four passport applications by declarants—that is, by persons who have only declared their intention to become American citizens through the regular process of naturalization—were transmitted during the year to the Secretary of State, as this officer is the only one authorized by law to issue passports to declarants. One application was granted, two were denied, and no action was taken on the other one.

Corporations and associations.—Sixty-three new business corporations, with a total authorized capital stock of \$18,639,000—or 31 more than in 1917–18—were organized in Porto Rico during the last fiscal year. No previous year can make a better showing, as the largest number of corporations organized in any past year was 40 in 1911–12. This result has been brought about, in my opinion, by two causes: (1) The increase in the money available for new businesses, due to the very good prices at which the principal products of this island have been sold on account of circumstances created by the war, and (2) the ever-growing tendency to incorporate every kind of mercantile, industrial, and agricultural trade, of which I spoke in one of my last reports.

Among these 63 corporations there were 3 small banking concerns, as a movement has been on foot lately for the establishment of local banks, either as branches of the most important organizations of this kind existing in the principal cities of the island or as independent and separate enterprises.

This extension of the banking transactions will no doubt be of great help to local business, small farmers and property owners, and laborers, who will have in that way more facilities to get loans for the development of their industry or to enable them to meet any emergency.

Six foreign corporations, with a total authorized capital stock of \$7,925,000, were also registered in this office for the purpose of doing business in Port Rico.

Moreover, 12 domestic and 1 foreign nonpecuniary associations were registered during the last fiscal year for fraternal, religious, educational, social, etc., aims.

In the same period 22 domestic corporations and 9 domestic nonpecuniary associations were dissolved and 10 foreign corporations ceased to do business in the island. The dissolution of 8 of the domestic concerns took place on account of a joint resolution passed by the legislature and approved by the governor. The passage of this joint resolution was urged by this office in view of information received to the effect that most of such corporations were practically out of business and that consequently it was impossible to hold the required general meeting of stockholders to dissolve them through the regular legal procedure. From time to time it has been necessary to follow this same method of dissolution by legislative action, not only to mark such corporations as out of existence in our registers but to make their names available for use by new corporate undertakings.

In connection with the registration and filing fees paid to this office by foreign corporations, it has been noticed that some of them, taking into consideration the amount of their assets and the development of their business, are not proportionally paying what they should pay for the privilege of carrying on their transactions in Porto Rico, in comparison with other foreign concerns engaged in the same line of business. Take, for instance, this example: A corporation of Illinois, with an authorized capital stock of \$100,000,000 and assets amounting to more than \$230,000,000, paid a registration and filing fee of \$1,000 at the time when our law did not fix a maximum fee, while a corporation of New Jersey, with a capital of \$100,000 and assets to the amount of more than \$60,000,000, paid only \$15, as there was no minimum fee established by law when it registered.

By the present method of assessment of the registration and filing fees, which is surely unjust and discriminating, any foreign closed corporation, by keeping the amount of its authorized capital stock as low as possible, might get some advantage against its competitors, and the legislature should provide some other method by which the foreign corporations should be put on a more equitable basis in securing the privilege of doing business in this island.

More information about this matter is to be found in the several statements attached to this report.

Trade-marks.—More evidence in connection with the remarkable growth in business of this country is shown by the fact that in 1918–19, 95 domestic trade-marks were registered in this office, representing an increase of 53 per cent, as compared with the registrations made in 1917–18.

These trade-marks were applicable to the sale of the following merchandise:

Metals, and metal castings and forgings.....	3
Confectionery.....	6
Motor vehicles and parts thereof.....	9
Clothing.....	5
Nonalcoholic beverages.....	8
Coffee.....	3
Toilet articles and preparations.....	6
Medicines.....	10
Cigars and cigarettes.....	4
Horological instruments.....	1
Foods and ingredients of foods.....	2
Furniture and upholstery.....	1
Petroleum products.....	1
Prints and publications.....	1
Knitted, netted, and textile fabrics.....	2

Hardware.....	3
Machines and machinery.....	5
Horse equipments.....	1
Nipples for nursing bottles.....	1
Paints and painters' materials.....	2
Chemicals.....	2
Measuring and scientific appliances.....	1
Construction materials.....	1
Optical goods.....	2
Fertilizers.....	1
Electrical apparatus.....	1
Paper and stationery.....	2
Abrasive, detergent, and polishing materials.....	2
Lithographers' supplies.....	1
Artificial lumber.....	2
Cutlery.....	2
Motion-picture machines, parts, and accessories.....	1
Heating apparatus.....	1
Fuel cubes containing inflammable ingredients.....	2
All kind of merchandises.....	1
Total.....	95

Also 30 United States trade-marks and 70 United States letters patent were registered in this office, making an increase of 44 per cent over the previous fiscal year.

Only a domestic trade-mark was denied registration on account of similarity with an other trade-mark already registered.

Old Spanish archives.—Year after year this office has been earnestly urging that these old archives be saved from the lamentable condition in which they have been kept almost since the American occupation of the island, and at last something is going to be done in accordance with our recommendations.

One of the first bills introduced in the last regular session of the legislature was bill No. 10, by Senator Abril, to create the Historical Archive of Porto Rico. It was promptly referred to the committee on education, but the last days of the session were reached without said committee having taken any action on it. Apparently any effort theretofore made to convince the legislators of the significance and necessity of this measure had failed, when, by a resolution of both branches of the legislature, a steering committee was designated to select, among the numberless bills that were still pending, those which, by their importance, should be considered and passed, if possible, before the end of the session.

I decided then to make an effort, with a view of avoiding that the bill in question should be pigeonholed. Thus a letter was written by me to the president of the senate, who was at the same time chairman of the steering committee, making a brief history of all the facts connected with these archives; its cession by Spain to the United States in accordance with the stipulations of the treaty of peace; the books and documents forming them; the deplorable condition in which they have been kept, first in the office of the commissioner of the interior, and then under the secretary of Porto Rico, for lack of sufficient personnel and also of suitable rooms, with light and ventilation enough, to preserve them from destruction by the moisture and the insects; and the unsuccessful efforts previously made for the creation of a bureau of archives.

I said that it was the duty of all of us to adopt urgently some measure in order that these archives might be kept for the use and benefit of the next generations, and to avoid the just criticism of future historians who would be prevented from using such valuable source of information in the reconstruction of the history of Porto Rico during the last centuries of the Spanish sovereignty. I also recommended the passage of bill No. 10, with some amendments necessary to assure the establishment of the archive and its good management.

Said letter was read to the steering committee and to the house of representatives, and immediately awakened the interest of all the members of the legislature. Bill No. 10 was readily passed, and it was approved by the governor on June 20, 1919. It creates the Historical Archive of Porto Rico; determines its object; assigns the public building where it should be installed; appropriates some money to start the work; provides the necessary personnel therefor and some rules for the keeping therein of all the documents appertaining to the time of the Spanish régime; and to guarantee a satisfactory management of the institution.

Now the principal thing is done, and it is hoped that the persons to whom this work is to be entrusted will meet the expectations of the public and will make of this Spanish archive a complete success, provided of course they may always count upon a liberal pecuniary help from the legislators.

During the last fiscal year 17 new files were formed, with 1,641 classified expedientes, the total number of new files now being 352 with 28,610 expedientes.

Notaries public.—Twenty-four new lawyers were authorized to practice the notarial profession throughout Porto Rico during 1918–19. The number of notaries registered in this office up to the close of the fiscal year was 252. Their names, residences, and dates of registration may be found in the list attached hereto.

An act was approved on April 28, 1919, to amend section 5 of the notarial law. It is the purpose of this amendment to give the notaries the right to change their registered seals, provided an impression of the new one is made in the register kept for the purpose in this office and the useless seal delivered to the executive secretary for destruction. Heretofore, the seal of a notary public could not be altered or changed once it was adopted and registered.

Other work.—The following additional work was done during the fiscal year:

Three hundred and twenty-five commissions for judicial, municipal, and executive officers were prepared, and, after having been signed by the governor, forwarded to the interested parties.

Forty-five municipal ordinances to sell, lease, or otherwise dispose of municipal real property were examined. Of them 39 were approved by the governor, 2 disapproved, and no action was necessary on the remaining 4.

Nineteen ordinances approved by the Executive Council authorizing loans to be made by municipalities and school boards were also examined, and all of them were approved by the governor.

Twelve ordinances adopted by the public service commission granting new or making amendments to existing, franchises were thoroughly perused, and all of them received the governor's approval.

Six hundred and sixty-five petitions for clemency were received and acted upon as follows: Granted, 205; denied, 369; not considered, 67; and pending at the close of the fiscal year, 24. In addition thereto, 31 commutations of sentences and pardons were granted on November 6, 1918, to some prisoners in the Aguadilla District Jail for valuable services rendered by them during and after the earthquake catastrophe in that region.

Eighty-four hunting licenses were renewed or newly issued.

Four new consular officers were registered.

Supply committee.—The work of the supply committee is increasing from year to year in the same proportion as the purchases of materials for the insular government is increasing. In the last fiscal year 42 meetings were held, 538 resolutions adopted, and 424 contracts awarded.

The uncertainty of market conditions and of transportation facilities continued during the whole year and the prices of merchandise have been so high that it has been necessary to make several calls for bids to award the contracts for the furnishing of provisions to penal and charitable institutions, not only because no bid was received in some cities at the first call, but also because the offers made in some cases were excessively high. It was impossible, in spite of the repeated efforts of the committee, to contract the furnishing of certain articles and the chief of the bureau of supplies, printing and transportation was then authorized to purchase them in the open market at the best prices obtainable for a period of three months, thus to be able to wait until a favorable change in the market situation might afford a better opportunity to make a new call for bids.

Said officer was also authorized, as in previous years, to go personally to all the capitals of judicial districts, together with a representative of the attorney general's office, for the purpose of awakening the interest of local merchants toward these government contracts, and it may be positively stated that in almost every case this procedure has produced very good results, as the most important articles have been contracted for at reasonable prices, never higher than the current ones.

Some purchases of rice and flour were made from the food commission during the year at prices lower than the quotations given to the committee by different bidders, with a considerable saving to The People of Porto Rico in these transactions. A purchase of coffee was also made from the government College of Agriculture at a very satisfactory price.

In the purchase of fresh milk and meat for the above-mentioned institutions we have been obliged to contend with some peculiar conditions. The sale of these two important commodities is controlled in certain municipalities by a few persons and sometimes by only one. So it is very difficult to receive many bids when a call therefor is made, and the quotations stated in the few bids submitted are generally exceedingly high. However, the supply committee was exceptionally fortunate in making a contract for meat, to be delivered at the institutions in San Juan, at 22 cents per pound for the first half of the fiscal year, a very good price at a time when a large number of Porto Rican soldiers had been mobilized at Camp Las Casas and were consuming large quantities of such commodity. After the demobilization took place

a contract was made for the furnishing of same article during the second half of the fiscal year at 15.8 cents per pound.

The difficulties experienced by the committee in the purchase of milk may be clearly understood by the fact that in order to make a contract for 50,000 quarts of milk for the second half of the year, four calls for bids were issued. In the first one the lowest bidder quoted 19 cents per quart; in the second, 17.88 cents; in the third, 17 cents; in the fourth, 15.89 cents. The award was finally made at the latter price, and by rejecting all the bids in the first three calls, The People of Porto Rico was able to save \$1,600 in this particular transaction.

In some cases the persons controlling the meat or milk market, in order to crush every competition, submitted bids signed by irresponsible bidders making very low quotations, and when the contract was awarded to one of them he would decline to accept it. His temporary bond of \$100 was, of course, forfeited, but there was some possibility of eliminating all other competitors in the second call for bids, thereby the controlling interests securing the contract at a higher price. In view of this situation, the supply committee decided to require in future a temporary bond of an amount equal to 10 per cent of the total value of the purchase instead of a bond of \$100 only.

On account of the abnormal market conditions, the bids from most merchants in the United States, were made subject to change without notice, and due to the uncertainty of the mails, said bids were being received too late to take advantage of the prices quoted therein. To obviate this difficulty, the purchasing agent at New York was instructed to submit by cable all prices and conditions upon the opening of the bids, and the award of the contracts was notified to the successful bidders by the same means of communication. Both the purchasing agent and the chief of the bureau of supplies were also instructed not to consider every requisition as a whole but to take the items in each of them separately and to proceed to purchase them right away in the open market, except whenever the value of a separate item should reach the amount of \$300, in which case, a call for bids should be made in compliance with the provisions of the law.

Other modifications made in the rules governing the purchase of supplies through public call for bids, were as follows: That whenever the amount of a bond covering 10 per cent of a contract for provisions is less than \$25, a bond be not required, and that when it amounts to less than \$50 and over \$25 either the regular written form or a cash bond should be filed. Also, that the supply committee reserves to itself the right to increase or diminish 20 per cent the quantities of the articles designated in the calls for bids.

Bureau of supplies, printing and transportation.—The fiscal year ending June 30, 1919, has been very pressing on this bureau, the business handled having reached still a higher level than shown in previous reports made since the reorganization of the bureau in the year 1916, while it has been necessary to depend on the short personnel authorized in the budget, which has not been increased for the last three years. The total amount of business during the year was \$2,392,842.68, which constitutes an increase over last fiscal year of \$570,681.59, or 31.32 per cent more. As the business during the fiscal year ending June 30, 1916, amounted to \$653,603.81, the total business handled during the fiscal year 1918-19 represents an increase of \$1,739,238.87, or 266.1 per cent more since the reorganization of the bureau. As the total amount paid for salaries and contingent expenses was \$33,676.53, the operating cost of the bureau was 1.41 per cent of the total amount of business, a reduction in said cost of 0.45 per cent as compared with the previous fiscal year.

The total purchases made by the supply division for the year amounted to \$1,140,938.47. This is an increase over the preceding year of \$301,863.13, or 35.98 per cent. Purchases made from merchants in Porto Rico amounted to \$864,129.89, there being an increase of \$191,146.03, or 28.4 per cent more than the previous year.

The purchases made from merchants in the United States are valued at \$276,808.58, representing an increase over the previous year of \$110,717.10, or 66.66 per cent. These purchases constitute mostly supplies that could not be obtained in Porto Rico. This increase, however, is very abnormal and requires some explanation.

Local merchants were not in a position to bid advantageous prices and in many cases were not in a position to bid at all, due to ruling war conditions, and besides, there were delivered during this year uniforms for the insular police in the amount of \$25,116; road rollers and parts thereof for the department of the interior and machinery for the irrigation service, which are not bought regularly every year, valued at \$36,723.56; and due to the campaign against the influenza it was necessary to purchase serums and drugs valued at \$10,538.33, and through the American Red Cross with the approval of the governor 25,000 blankets in the amount of \$23,989.62.

Total sales made during the year amounted to \$1,188,364.68, an increase over last

year of \$283,532.90 or 31.34 per cent. Of this amount, \$101,726.79 covers merchandise and automobile supplies sold from the stock of the bureau.

The supply division of the bureau has had strenuous work during the last fiscal year, as in addition to the regular work, it had to give special attention to the campaign against the influenza epidemic and the campaign against prostitution, carried out by the departments of health and justice, respectively, as well as to the purchase of construction materials for the repairs of public buildings damaged by the earthquakes.

The volume of work that fell upon the supply division was so large, that it was impossible to handle it with its personnel in the manner required by the needs of the public service, and this situation would have seriously handicapped the division's work had it not been for the timely cooperation and help given by the health department, by assigning four of their employees to work in the bureau for a period of three months. Due precaution was taken by the supply division in the purchase of these large quantities of materials and supplies so as not to alarm the local trade and have merchants take advantage of the situation and advance their prices. All prices paid were the lowest that could be obtained under the war conditions at that time.

The market conditions created by the war did not improve during the last fiscal year. After the signing of the armistice in November, 1918, prices continued at the same high level as during the war, local stocks of supplies were not replenished, and the difficulties in securing materials continued as before. During the months of February and March, 1919, textiles and hardware had a drop in prices. Such prices have since then advanced and at the end of the year practically all merchandise and materials were quoted at higher prices than those paid during the war.

During the year 9,276 requisitions were received from the several departments and offices of the Government, 19,642 orders were issued to merchants and contractors 14,097 invoices were received from them, 14,879 bills were rendered to the departments, and 5,069 vouchers were issued for payment to local merchants. This shows an increase in the work done by the supply division which made it necessary for the personnel to work the greater part of the year during extra hours and holidays. This situation was thoroughly explained by the undersigned to the legislature, and in the budget for the fiscal years 1919-20 and 1920-21, the following additional positions were created: One assistant accountant, one voucher clerk, and two typewriting clerks.

The net output of the printing division amounted to \$68,560.19, representing a decrease of \$2,613.49, or 3.81 per cent, less than the previous year. Work was undertaken on 2,873 jobs.

It was also necessary for the personnel of the printing division to work during evenings and holidays while the legislature was in session, so as to meet the demand of rush work from the legislature and the different departments.

In the appropriation act for 1919-20 and 1920-21 the position of assistant superintendent of this division was also created, in order to relieve the superintendent of part of the large amount of work which has heretofore fallen upon him.

The records of the transportation division show a running for all cars of 144,547 kilometers in 506 trips, an increase over the preceding year of 6,420 kilometers. The average cost per kilometer is 16 cents. There is an increase in cost of 3 cents per kilometer over the previous year, which is due to the gradual increase in the prices of automobile supplies and partly to the use of large cars. At the beginning of the fiscal year two new roadster cars were bought. Two old runabouts were given as part payment, and the balance was paid for from the fund set aside as reserve for purchases and renewals of equipment. As reported last year, the cars now in the service have been running for such a long time that they could only be used by making frequent repairs to them.

It was necessary to hire cars for 38 trips during last year at a total cost of \$3,136.50. The hiring of private cars for the Government service is expensive and the interest of a good service requires an increase in the number of cars in the hands of the bureau as well as the prompt replacement of the old ones at present in use. During the visit of the congressional party in the month of April, the transportation division had full charge of all automobile trips in San Juan and the island and a sufficient number of cars were hired, at a cost of about \$6,000, which was paid direct by the entertainment committee of the legislature.

The attached statements will give a better idea of the volume of business handled by the bureau.

Bureau of weights and measures.—In view of the high cost of living which has been aggravated by the World's War a greater activity has been displayed by this bureau to insure to the people full weight and measure in the purchase of their commodities, and to this end every official of the bureau of weights and measures has been required to exert the utmost vigilance.

The activity displayed by the six traveling inspectors of the bureau in the prosecution of fraud, is demonstrated by the fact that while last year 487 cases of violations were denounced by them before the courts, a record which could hardly be surpassed, this year the number of denouncements increased to 523.

The work of the municipal inspectors which last year was greatly hampered on account of many of them having to serve on the local military recruiting boards, has this year been no less hampered because of the fact that 24 out of the 69 municipal inspectors resigned their positions to accept other ones. The salary as a rule paid to these inspectors is so small that the most competent inspectors leave as soon as they find better remunerated positions, and their stay in the service is thus as a general rule of short duration. As a result, a constant change in the personnel of the municipal inspectors is produced which is highly detrimental to the service.

The number of certificates issued by the bureau, of weighings performed by its inspectors at the request of merchants or importers in order to verify and certify to the exact net weight of the merchandise received by them, reached up to 125 this year, or 52 per cent over the number of such certificates issued the previous year.

Statement No. 8, attached to this report, shows the work accomplished during the year in every municipality by insular and municipal inspectors, respectively.

Table No. 1 indicates the results of the inspections and tests of all the weighing and measuring instruments made by the insular and municipal inspectors throughout the island.

During the year 175,724 weights and measures apparatus were tested by the inspectors. The percentage of instruments found correct was 79.68 as against 81.75 during the preceding year. This decrease in the number of correct instruments brought about a corresponding increase in the percentage of instruments found incorrect and rejected for repairs, such percentage being 13.61 in 1917-18 as against 15.31 this year. This result can be attributed only to the abnormal situation still in existence. Even merchants must necessarily be economical, and an instrument that a few years ago would have been thrown to the scrap heap and substituted by a new one, to-day they try by all means to have it repaired for further use.

The percentage of instruments confiscated is very slightly larger this year, it being 3.92 as against 3.73 the preceding year.

TABLE NO. 1.—*Instruments tested.*

	Cor- rect.	Per- cent. ¹	Last year's per- cent- age.	Cor- rected by inspec- tor.	Con- demned for re- pairs.	Per- cent. ¹	Last year's per- cent- age.	Con- demned and confis- cated.	Per- cent. ¹	Last year's per- cent- age.	Total.	New.
Counter scales.....	8,955	89.88	91.71	100	783	77.86	5.38	125	1.25	1.74	9,903	309
Spring scales.....	2,926	86.98	84.54	39	282	8.38	8.30	126	3.74	5.21	3,364	1,270
Platform scales.....	3,029	81.58	81.40	147	508	13.68	18.34	29	.78	2.65	3,713	94
Weights.....	90,812	73.86	76.90	1,576	25,151	17.20	18.02	5,399	4.39	4.14	122,938	9,235
Linear measures....	12,594	95.28	95.24	4	74	.54	1.04	561	4.14	3.45	14,267	6,869
Liquid measures....	17,333	96.30	93.41	22	88	.49	2.93	555	3.08	2.96	17,998	5,922
Miscellaneous.....	3,368	96.75	90.56	8	80	.86	6.84	75	2.15	2.19	3,481	3,028
Total.....	140,017	79.68	81.75	1,887	26,970	15.31	13.61	6,900	3.92	3.73	175,724	26,914

¹ This percentage is of the total number of this class of instruments tested.

² Computing scales, counter tacks, milk bottles, measuring pumps, glass graduates, etc.

³ Total number of incorrect instruments in use, 35,707, or 20.32 per cent; in 1917-18, 18.25 per cent; in 1916-17, 18.14 per cent.

All the instruments, weights, etc., imported into or manufactured in Porto Rico and tested by this bureau before they are sold or offered for sale appear in Table No. 2.

TABLE NO. 2.—*Class 1, new instruments tested before being offered for sale.*

	Scales.			Weights.	Measures.		Milk bot- tles.	Drug- gists' weights.	Glass grad- uates.	Total.
	Counter.	Plat- form.	Spring.		Liquid.	Linear.				
San Juan.....	148	39	896	6,131	2,854	3,795	1,144	441	896	16,335
Ponce.....	151	36	292	2,054	1,813	888	.....	.....	544	5,778
Mayaguez.....	.....	.....	.....	236	751	1,500	.....	.....	.....	2,487
Arecibo.....	49	5	3	631	16	479	.....	.....	.....	1,183
Other towns.....	21	14	89	283	484	237	.....	.....	.....	1,126
Total.....	369	94	1,270	9,335	5,922	6,890	1,144	441	1,440	26,914

The following table shows the instruments rejected for repairs on first inspection and sealed or confiscated as incorrect and not susceptible of repairs upon reinspection, from the fiscal year 1914-15 to the fiscal year 1918-19:

TABLE NO. 3.—*Instruments rejected for repairs on first inspection and sealed or confiscated as incorrect and not susceptible of repairs upon reinspection.*

Fiscal year.	Counter scales.		Spring scales.		Platform scales. ¹		Weights.		Liquid measures.		Linear measures.	
	Sealed.	Confiscated.	Sealed.	Confiscated.	Sealed.	Confiscated.	Sealed.	Confiscated.	Sealed.	Confiscated.	Sealed.	Confiscated.
	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.
1914-15...	61	39	55	45	88	12	80	20	.....	.....	.....	.....
1915-16...	75	25	57	43	88	12	76	24	.....	.....	.....	.....
1916-17...	77	23	47	53	89	11	85	15	.....	.....	.....	.....
1917-18...	81.7	18.3	48.3	51.7	94.5	5.5	91.8	8.2	60	40	54	46
1918-19...	94	6	71	29	96	4	89	11	50	50	59	41

¹ Large capacity platform scales not included.

It will be noticed that the gradual yearly increase in the percentages of instruments sealed upon reinspection and the corresponding decrease in the percentages of instruments confiscated has been maintained.

Three factors have combined, no doubt, to enable the bureau to reach these results, to wit: a better quality of instruments used which makes them more susceptible of repairs; improvement of the knowledge and efficiency of the mechanics who repair the instruments; and the high increase in the cost of the instruments, which induces the merchants to have them repaired rather than stand the expense of obtaining new ones.

TABLE NO. 4.—*Errors found in weights tested.*

Size of weights.	Weights.	Total weight.	Total of errors.
	Number.	Pounds.	Grams.
8 pounds.....	167	1,336	1,629
4 pounds.....	2,535	10,140	16,561
2 pounds.....	3,513	2,026	17,582
1 pound.....	3,598	3,598	14,981
8 ounces.....	3,376	1,687	10,151
4 ounces.....	2,042	760	7,370
2 ounces.....	2,635	829	4,929
1 ounce.....	1,858	115	2,572
Total.....	20,724	24,991	76,075

Grams.

Average error per pound 1914-15.....	8.18
Average error per pound 1916-17.....	3.33
Average error per pound 1917-18.....	3.15
Average error per pound 1918-19.....	3.04

As shown in the above table the average error per pound has decreased year after year since 1914-15, when it was 8.18 grams, to the present year, when it is only 3.04, or a little over twice the permissible variation. As a rule the errors found in the weights were such as must result from the wear and tear incident to their constant use throughout the year. This result is most satisfactory and goes far to demonstrate the protection afforded the buying public by the bureau of weights and measures.

TABLE NO. 5.—*Inspection of large capacity platform scales used to weigh sugar cane.*

	Found correct and sealed.			Adjusted by the inspectors.			Rejected for repairs.			Total
	Num-ber.	Per cent.	Last year's per cent.	Num-ber.	Per cent.	Last year's per cent.	Num-ber.	Per cent.	Last year's per cent.	
Railroad scales.....	61	70.9	53.3	17	19.8	16.3	8	9.3	30.4	86
Cart scales.....	187	73	52.4	45	17.6	20.2	24	9.4	27.4	256
Weights.....	999	97	93.8	15	1.5	3.2	15	1.5	3.0	999

Following the policy adopted by the bureau during the preceding year, these scales were inspected and tested during and not before the beginning of the grinding season. As shown in the above table, out of a total of 86 track scales tested, 61 were sealed as correct, or 70.9 per cent, as against 53.3 per cent last year and 35.3 per cent the previous year of 1916-17. In three years the bureau has been able to double the percentage of correctness of this kind of apparatus. Out of 256 cart scales tested 187 were sealed, or 73 per cent, as against 52.4 per cent for the previous year and 46.1 per cent for 1916-17, which represents a raise of 27 per cent obtained in three years. The counterpoise weights were also found in a much better condition, 969 out of 999 weights tested, or 97 per cent, having been found correct, as against 93.8 per cent for 1917-18 and 84 per cent for 1916-17.

The good results obtained this year in the inspection of these instruments indicate that the bureau will finally succeed in its efforts to obtain that the owners of these scales shall take the necessary care to keep them in good condition and correct while in use.

Reweighings of the cane deliveries by colonos to the centrales have also been effected. The insular inspectors have attended to this part of their obligations and every time that they have had a chance in their trips throughout the barrios to reweigh a cart load they have done so. A few special trips were made also for that purpose, but the limited number of inspectors and lack of funds prevented the bureau to do more of this special work, the detail of four inspectors at least being necessary to watch the cane zone. Experience has demonstrated that it is absolutely necessary to have two inspectors travel together for this kind of work to be sure that the purposes of the law will not be defeated. Where fraud is found and the same is to be denounced it is very difficult often to find a person willing to serve as a witness against the weighers and hence the necessity of two inspectors traveling together.

Not only with a view of correcting this deficiency, but also for the purpose of having one insular inspector assigned to each judicial district, the undersigned personally appeared before the finance committee of both branches of the legislature and asked for two more inspectors. This petition was granted and for the next two fiscal years the bureau will have the services of eight instead of six inspectors.

The exactness of the tare indication on the cars used to transport the cane of the colonos to the centrales was also the object of verification by the inspectors. This tare must be deducted from the gross weight indicated by the scales. As very often the colonos load their cane directly on these cars without any previous weighing, as the centrales buy only according to the weight shown by the track scales of their factories, it will be easily understood that if the tare marked on the cars is greater than it should be, the colonos lose an amount of cane corresponding to this excess of tare each time it is deducted from the gross weight of the car. In some centrales the inspectors found the tare marked on their cars to be slightly in error, sometimes in favor of and sometimes against the colonos, and these errors were ordered corrected at once. In one centrale the errors found were mostly against the colonos and the case was submitted to the court.

During the year 433,817 packages of goods were reweighed, mostly at the time of their delivery to the purchasers, as against 251,306 packages reweighed during the previous year. The percentage of correct packages which has been yearly increasing until last year it reached 81.89 per cent has suffered this year a noticeable decrease, being only 73.06 per cent; but this decrease is nearly offset by the increase in the percentage of packages with errors in excess. In fact, if we add the two percentages of packages found correct and of packages with errors in excess we find a total of 93.50 per cent, while for 1917-18 we had a total of 95.56 per cent, or a difference of only 2.06 per cent.

The percentage of packages found with deficiency errors reached this year 6.50 per cent, as against 4.44 per cent during the previous year. This increase is believed to be due to the greater incentive to defraud the buyers on account of the high prices as well as to a more active campaign waged against fraud.

The following table, No. 6, is a résumé of the reweighings made in each municipality by the insular and municipal inspectors and by the insular police:

TABLE No. 6.—*Reweighing of packages.*

MUNICIPAL INSPECTORS.

	Correct.	Heavy.	Light.	Total weight or quantity.		
				Pounds.	Yards.	Quarts.
Adjuntas.....	4,212	2,819	227	11,480	1,197	.....
Aguada.....	16,009	4,002	2,086	30,639	462	.....
Aguadilla.....	580	246	108	1,025	.....	.....
Agua Buena.....	367	232	42	1,041	7	.....
Albionito.....	2,064	.....	.....	2,226	1,825	.....
Asencio.....	18,682	18,538	1,903	67,094	3,749	2,278
Arecibo.....	2,018	113	153	2,748	.....	121
Arroyo.....	4,160	2,600	2,770	9,259	.....	.....
Barceloneta.....	1,593	.....	.....	2,443	250	63
Barros.....	860	240	180	1,970	29	7
Beyamon.....	2,222	221	87	3,049	18	12
Cabo Rojo.....	7,459	1,293	626	12,692	899	242
Caguas.....	1,009	174	108	2,455	636	144
Camuy.....	379	622	99	1,715	78	30
Carolina.....	2,255	4,855	1,232	9,649	463	106
Cayey.....	10,234	4,773	171	30,399	.....	.....
Ceiba.....	804	8	3	1,131	15	.....
Ciales.....	640	1,460	162	3,265	.....	.....
Cidra.....	3,569	613	270	5,478	882	24
Coamo.....	9,197	1,278	70	17,709	.....	.....
Comerio.....	683	69	52	1,461	.....	.....
Dorado.....	1,416	5,501	43	2,879	.....	.....
Fajardo.....	8,703	1,782	56	12,216	.....	1
Guanica.....	4,007	136	5	5,470	7	.....
Guayama.....	2,636	1,313	43	6,800	.....	2
Guayanilla.....	765	80	10	1,194	.....	.....
Guaynabo.....	2,767	664	102	7,931	.....	.....
Gurabo.....	4,914	1,000	402	7,192	.....	.....
Hatillo.....	3,647	.....	17	3,731	.....	522
Hormigueros.....	7,330	.....	.....	10,138	.....	.....
Humacao.....	2,464	100	72	4,064	.....	12
Isabela.....	3,897	3	.....	4,298	30	170
Jayuya.....	1,278	.....	24	3,090	166	.....
Juana Díaz.....	3,304	697	3,045	8,866	960	.....
Juncos.....	3,234	112	43	4,965	.....	.....
Lajas.....	1,880	665	73	3,459	.....	.....
Lares.....	3,101	110	467	7,837	1,673	265
Las Marías.....	767	123	9	990	76	44
Las Piedras.....	3,984	794	416	5,884	.....	.....
Loíza.....	962	336	79	1,319	603	8
Luquillo.....	501	112	209	1,025	11	.....
Manatí.....	5,553	687	71	14,078	209	383
Maricao.....	3,628	256	167	4,159	.....	144
Masabo.....	4,369	6,107	2,707	10,585	32	2
Mayaguez.....	12,848	1,091	54	12,229	.....	.....
Moca.....	1,398	249	22	3,282	.....	.....
Morovis.....	691	191	16	999	.....	.....
Naguabo.....	6,349	4,341	343	18,610	66	278
Ponce.....	26,335	625	245	39,349	.....	317
Quebradillas.....	712	2	8	1,259	96	20
Rincón.....	521	.....	.....	794	8	.....
Rio Grande.....	1,081	107	30	1,481	.....	.....
Rio Piedras.....	2,724	930	132	7,983	146	169
Sabana Grande.....	11,164	812	471	15,710	.....	.....
Salinas.....	435	236	19	976	237	.....
San German.....	6,117	811	395	9,280	584	.....
San Juan.....	6,019	214	49	10,009	.....	5
San Lorenzo.....	583	22	.....	845	.....	.....
San Sebastian.....	1,292	.....	.....	2,320	.....	.....
Santa Isabel.....	4,900	492	249	6,049	.....	.....
Torres.....	239	29	12	472	12	.....
Trujillo Alto.....	26	.....	.....	47	.....	.....
Ututo.....	3,554	21	70	6,080	.....	120
Vega Alta.....	2,392	65	70	3,806	5	15
Vega Baja.....	4,542	611	142	6,291	331	240
Vieques.....	4,587	2,062	607	12,592	62	100
Yabucoa.....	3,455	694	141	3,809	1,116	131
Yauco.....	12,366	2,330	834,834	27,772	.....	.....
Total.....	279,923	75,659	22,788	546,864	16,940	5,975

TABLE No. 6.—*Reweighting of packages*—Continued.

INSULAR POLICE.

	Correct.	Heavy.	Light.	Total weight or quantity.		
				Pounds.	Yards.	Quarts.
Arecibo.....	96	2		171		8
Barceloneta.....	36			87	25	
Barros.....	158	70	7	385	22	
Bayamon.....	124	4	4	403		
Coamo.....	130		3	146		
Corozal.....				76		
Culebra.....	476		3	517		
Guanica.....		11		11		
Juana Diaz.....	147	16	180	363		
Loiza.....	41			83		
Manati.....	1,800	2	3	209	91	
Maricao.....	392			775	108	
Maunabo.....	36	63	41	151		
Patillas.....	1,741	421				
Pefuelas.....	156		421	2,806	28	
Quebradillas.....				145		
Sabana Grande.....	2,503	6	4	899		
San Lorenzo.....	139	18		314		
San Sebastian.....	804			821	11	41
Yauco.....	487	172	31	1,156	4	109
	9,366	785	694	9,412	295	158

INSULAR INSPECTORS.

	Correct.	Heavy.	Light.	Total weight or quantity.		
				Pounds.	Yards.	Quarts.
Adjuntas.....	198	156	551	544		19
Aguada.....	14	10	1	23	8	
Aguas Illas.....	157	13	17	209		1
Aguas Buenas.....	43	10	25	78		
Aibonito.....	23	159	37	335		3
Aibasco.....	67	17	1	94		
Arecibo.....	445	19	46	458	7	85
Arroyo.....	48	360	115	662		4
Barceloneta.....	64	4	4	64	4	6
Barranquitas.....	79		11	92		25
Barros.....	40	25		151		
Bayamon.....	79	105	29	319		92
Cabo Rojo.....	98	31		168		
Caguas.....	1,311	1,472	391	2,662		81
Camuy.....	185	42	15	243		46
Carolina.....	121	66	31	401		
Cavey.....	7	4	272	384	9	
Ceiba.....	121	12	1	168		
Ciales.....	118	148	41	498	3	1
Cifra.....	49	806	111	1,219		
Coamo.....	243	42	15	306		
Comerio.....	184	208	69	659	15	
Corozal.....	76	39	1	152		6
Culebra.....	9			8		
Dorado.....	29	2	21	50		
Fajardo.....	470	155	262	579		8
Guanica.....	23	10		35		
Guayama.....	89	282	30	576		2
Guayanilla.....	208	74	37	662		
Guayanabo.....	71	50	17	182		
Gurabo.....	38	26	15	60		
Hatillo.....	32		51	64		3
Hormigueros.....	35	11		43		
Humacao.....	332	524	48	1,124		8
Isabella.....	184			5		
Jayuya.....	88			90		4
Juana Diaz.....	70	37	7	426		3
Juncos.....	176	87	47	458	7	
Lajas.....	128	44	1	167		
Lares.....	390	12	4	401		8
Las Marias.....	45	16		67		
Las Piedras.....	170	36	25	211		
Loiza.....	52	12		69	8	
Luquillo.....	27	18		36		

TABLE No. 6.—*Reweighing of packages*—Continued.

INSULAR INSPECTORS.

	Correct.	Heavy	Light.	Total weight or quantity.		
				Pounds.	Yards.	Quaats.
Manati.....	128	128	84	446		1
Maricao.....	42	10		60		
Mannabe.....	28	231	19	320		
Mayaguez.....	8,276	1,831	37	11,580	122	33
Moca.....	101			110		
Morovis.....	88	16	5	123	15	
Naguabo.....	155	8		161	58	
Naranjito.....	46	45		91		
Patillas.....	5	458	13	677		
Pedueñas.....	257	5	16	135	6	46
Quebradillas.....	174	56	53	144		6
Rincon.....	18	10		26		
Rio Grande.....	12	12		24		
Rio Piedras.....	807	100	291	1,464	132	93
Sabana Grande.....	246	65		428	59	
Sainas.....	63	3	13	58		2
San German.....	140	43		224		
San Juan.....	8,806	3,076	1,733	15,854	3	90
San Lorenzo.....	69	265	122	656		4
San Sebastian.....	203	41	10	278		4
Santa Isabel.....	12			12		
Toa Alta.....	82	50	38	276	5	
Toa Baja.....	44	34	19	130		
Trujillo Alto.....	189	2		114		
Utinado.....	361	288	32	833		28
Vega Alta.....	28	11	11	63		
Vega Baja.....	338	129	125	710	13	2
Vieques.....	412	43	80	471		
Villalba.....	46	35	120	178		
Yabucoa.....	18	59	64	135		5
Yauco.....	112	35	10	241		
	27,655	12,233	4,714	51,251	474	709

RECAPITULATION.

	Total, 438,817.		
	Correct, 316,944 (73.05 per cent).	Heavy, 88,677 (20.44 per cent).	Light, 23,196 (6.50 per cent).
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1917-18.....	81.69	13.67	4.44
1916-17.....	78.16	20.41	3.43
1915-16.....	72.09	24.09	4.00

TABLE No. 7.—*Violations.*

	Number.	Convicted.	Ab- solved.	With- drawn.	Fines.	Jail sen- tences.
Cases denounced by:						<i>Days.</i>
Insular inspectors.....	523	429	76	18	\$3,169.06	11
Municipal inspectors.....	262	164	36	2	588.00	2
Insular police.....	317	263	48	6	1,361.50	200
Total, 1918-19.....	1,042	866 82.15 p. ct.	180	26	4,118.50	213
Total, 1917-18.....	1,123	1,043 88.24 p. ct.	137	2	4,845.00	10
Total, 1916-17.....	1,345	1,215 90 p. ct.	104	26	4,102.00	234
Total, 1915-16.....	1,046	924 88 p. ct.				
Total, 1914-15.....	681	573 84 p. ct.				

As shown in the above table, ~~1,342 cases~~ were tried this year as against 1,182 the previous year, but this decrease is due to the fact that the funds appropriated for traveling expenses for the municipal courts had been exhausted before the end of the fiscal year and the trial of many cases already filed with them had to be postponed.

The number of convictions was this year 856, or 82.15 per cent of the total number of cases filed. If we compare this percentage with that of the previous year, when it was 88.24, we must admit that the violators have been more fortunate this year in escaping the punishment of the law.

Though the total amount of fines imposed this year is less than last year's, the average fine is slightly higher, as we have now \$4.81 against \$4.64 for 1917-18. This slight increase is to be attributed to several cases of second and third offenses, for which the law fixes a minimum fine of from \$50 to \$200. A classification of the fines imposed by the courts during the year and reported by the inspectors is given in the following table:

TABLE No. 8.—*Classification of fines according to their amount.*

Amount.	Number of fines.	Total.	Amount.	Number of fines.	Total.
\$0.50.....	1	\$0.50	\$15.....	6	\$90.00
\$1.....	250	250.00	\$20.....	4	80.00
\$2.....	268	536.00	\$25.....	1	25.00
\$3.....	99	297.00	\$30.....	2	60.00
\$4.....	4	16.00	\$40.....	1	40.00
\$5.....	160	800.00	\$50.....	15	750.00
\$6.....	2	12.00	\$100.....	2	200.00
\$7.....	2	14.00	\$200.....	3	600.00
\$8.....	1	8.00			
\$10.....	84	340.00	Total.....	855	4,118.50

As may be seen, out of the 855 fines imposed 518, or more than 60 per cent, ranged from \$1 to \$2, and 782, or over 91 per cent, ranged from \$2 to \$5.

TABLE No. 9.—*Classification of violations.*

Sections of the law violated and denounced to the courts.	Number of cases tried.	Sections of the law violated and denounced to the courts.	Number of cases tried.
Section 15, short weight of measure.....	552	Section 18, marking of false weights or false tare on boxes, packages, etc.....	7
Section 14, defective or faulty instruments or weights.....	132	Resolutions of food commission.....	6
Section 17 and paragraph 23, requiring net weight of contents in boxes, packages, etc.....	97	Paragraphs 24 and 10, hindering inspectors in their work.....	4
Section 19, alteration to weights and measures after having been sealed.....	67	Section 34 of a municipal ordinance.....	3
Act No. 13 of 1917, regulating the weight of loaves of bread, requiring indication of the price per pound, etc.....	50	Section 13, failure to present weights and measures to the inspectors upon request.....	2
Section 16 and paragraph 1, use of illegal weights and measures.....	50	Paragraph 17, removal of seals or condemning tags.....	1
Section 12 and paragraph 20, use of new weights or measures without having been tested.....	41	Paragraph 28, requiring dry commodities to be sold by weight or measure only.....	1
Section 10, old weights or measures in use without having been tested.....	28	Section 470, Penal Code, defrauding of labor.....	1
		Total.....	1,042

As shown in the above table the violations of section 15 of the weights and measures act occupy the first place. This is the section that prohibits the fraudulent or short weight or measure, the total being 552. The percentage of these violations is over 52 per cent of the total number of violations denounced, as against 47 per cent during the previous year.

As stated somewhere else in this report, two bills connected with the work of this bureau were passed by the last legislature and approved by the governor.

One makes an amendment to the original weights and measures act consisting in the definition of the words "commercial and industrial transactions" so as to include in same "the purchase or sale of any work, task, or service, the value of which is computed by the use of measures of weight or any other measure except that of time."

By virtue of this amendment the bureau will have the power to regulate the measures that the coffee planters use to compute the amount of work done by their coffee pickers and to control the weight of the tobacco leaves delivered to the tobacco strippers (*despalilladoras*), according to which their wages are computed, as well as any other investigation of a similar nature. This amendment was necessary in view of the interpretation placed upon the original act by the supreme court of Porto Rico.

The other was to establish an inspection service of electric, gas, and water meters, the necessity of which was self-evident, the people having been clamoring therefor for a considerable number of years.

It would be superfluous to try to demonstrate the importance and need of this law. Unfortunately it will be very difficult, almost impossible, to enforce the same, because in the budget for the next two fiscal years the legislature failed to include the appropriations necessary to pay the salaries of all the personnel provided for in the law.

The above-mentioned bills were prepared in the bureau of weights and measures and given to certain representatives who introduced them into the lower house. The first one passed as originally drafted; the second one was passed with amendments totally suggested by the undersigned after some conferences had with the chief and the assistant chief of the bureau.

Fees.—The collection of fees in this office during the fiscal year was as follows:

Filing and registration fees, corporation papers.....	\$7,256.30
Registration of domestic trade-marks.....	1,285.20
Passports.....	1,421.00
Hunting licenses.....	840.00
Authentication of signatures and certified copies of documents.....	1,080.85
Registration of United States patents and trade-marks.....	148.00
Total.....	12,031.45

Expenditures.—The expenditures of this office during the fiscal year 1918-19 were as follows:

Appropriations.	Office of Executive Secretary.	Bureau of Weights and Measures.	Bureau of Supplies, Printing, and Transportation.	Total.
Salaries.....	\$32,188.82	\$11,541.86	\$25,729.69	\$69,560.37
Stationery and printing.....	528.97	681.33	1,264.10	2,474.40
Furniture.....	363.08			363.08
Postage and freight.....	213.82	1,315.63	410.02	1,939.47
Telegraph and Telephone.....	6.82	24.91	312.47	344.20
Incidentals.....	721.04	270.60	485.78	1,477.42
Printing and publication of laws.....	199.72			199.72
Traveling expenses.....		3,513.94	26.50	3,539.44
Equipment of weights and measures.....		404.19		404.19
Additional temporary help.....			447.50	447.50
NEW YORK OFFICE.				
Salaries.....			3,960.11	3,960.11
Rent.....			847.88	847.88
Stationery and printing.....			109.78	109.78
Telegraph and telephone.....			91.70	91.70
Total.....	34,222.27	17,852.46	33,676.53	85,751.26

Before ending this annual report I wish to express my sincere and full recognition of the efficient help given to me by the assistant executive secretary, the chiefs of bureaus, and all the other employees of this office.

Very respectfully,

R. SIACA PACHECO,
Executive Secretary of Porto Rico.

The GOVERNOR,
San Juan, P. R.

STATEMENT No. 1.—*Domestic corporations registered in the office of the executive secretary during the fiscal year 1918-19.*

Name.	Location of principal place of business.	Principal purposes.	Total authorized capital stock.	Paid-in capital with which corporation was to commence business.
Compania Industrial y Agricola del Fraile.	Humacao.	Agriculture and manufacture of starch.	\$25,000	\$6,000
Porto Rico Confection Co. (Inc.)	San Juan.	Confections.	100,000	4,500
Sucesores del Cine Campanor, Corporation Guayamesa.	Guayama.	Moving pictures.	20,000	1,600
Monte Cristy Rice Co.	San Juan.	Rice and other agricultural products.	50,000	1,000
Banco Masonico de Puerto Rico.	do.	Banking.	100,000	1,010
The France & New York Medicine Co.	Ponce.	Drugs and chemicals.	2,400,000	28,000
The Legrand Laboratories Corporation.	San Juan.	do.	12,000	1,600
Compania Popular de Transporte.	Bayamon.	Transportation.	15,000	1,000
The Puerto Rico Importing Co.	Ponce.	Importation and polishing of precious stones.	100,000	1,000
Compania Mercantil Arroyana.	Arroyo.	Mercantile and agricultural.	40,000	1,000
Porto Rico Soap Co.	San Juan.	Soaps.	25,000	5,000
H. Glyde Gregory (Inc.)	do.	Buying and selling machinery and supplies.	50,000	1,000
Porto Rico Iron Works (Inc.)	Ponce.	Casting of machinery.	200,000	10,000
Malatrasi Hotels Co.	San Juan.	Hotels.	100,000	35,000
Corporacion Constructora del Liceo Ponceno.	Ponce.	Construction and lease of buildings for Liceo Ponceno.	100,000	6,500
Nathaniel Charles Coan (Inc.)	San Juan.	Mercantile.	25,000	25,000
Arctic Sugar Corporation ¹	Salinas.	Sugar.	900,000	1,500
Boston Plantations Co.	San Juan.	Agriculture.	150,000	1,000
La Democracia Incorporada.	do.	Publishing, printing and stationery.	100,000	5,400
Fruit Products Corporation.	do.	Fruit juices and other fruit products.	180,000	1,000
The Star Drug Co. (Inc.)	do.	Drugs and chemicals.	10,000	2,000
Sanchez Morales Co. (Inc.) ²	do.	Mercantile.	400,000	21,000
La Industrial Algodonera.	do.	Knit cotton goods.	100,000	28,000
The Sugar Sales Corporation of Porto Rico.	do.	Mercantile and agricultural.	1,000,000	100,000
Wanzer & Co. (Inc.)	do.	Mercantile.	150,000	75,000
Sociedad Recreation de San Juan (Inc.)	do.	Amusements.	250,000	1,600
La Plata Mining Co.	Ponce.	Mining.	1,000,000	2,500
The Porto Rico Aerial Transportation Co.	Mayaguez.	Aerial transportation.	200,000	1,200
Caribbean Soap Co. (Inc.)	Guayama.	Soaps.	100,000	2,620
The Fajardo Sugar Co. of Porto Rico.	Fajardo.	Sugar.	5,000,000	1,000
Sociedad Industrial La Constancia.	Ponce.	Soup pastes and confections.	200,000	2,000
Asociacion Constructora del Edificio Casino de Mayaguez.	Mayaguez.	Construction and lease of building for Casino de Mayaguez.	25,000	1,000
Arecibo Dock & Shipping Co.	Arecibo.	Transportation and docks, wharves, etc.	200,000	5,000
Caribbean Publishing Co.	San Juan.	Publishing, printing and stationery.	30,000	1,000
Porto Rican American Tobacco Co. of Porto Rico.	do.	Manufacturing tobacco.	2,000,000	1,000
German Diaz & Hno. (Inc.)	do.	Printing and stationery.	100,000	2,700
Llado Cigars (Inc.)	do.	Growing and manufacturing tobacco.	25,000	1,000
Compania Editorial Puertorriquena	do.	Publishing, printing, and stationery.	30,000	1,000
Samana Industrial Co. (Inc.)	Mayaguez.	Sawing and planing wood.	50,000	2,500
The Porto Rico Electroplying Co. (Inc.)	San Juan.	Electroplying.	20,000	1,000
The Trust Co. of Porto Rico.	do.	Banking and trust business.	500,000	1,000
Compania Editora de Justicia.	do.	Publishing and printing.	30,000	1,000
Compania Industrial Occidental.	San German.	Electric power for lighting and other purposes.	35,000	6,600
Compania Editora "El Ideal" (Inc.)	San Juan.	Publishing, printing, and stationery.	10,000	1,000
Porto Rico Cine Corporation.	Arroyo.	Moving pictures.	50,000	1,000
The Mayaguez Publishing Co.	Mayaguez.	Publishing, printing, and stationery.	25,000	1,200

¹ Name changed subsequently to incorporation to "Central Aguirre Sugar Co."² Name changed subsequently to incorporation to "Sanchez Morales & Co. (Inc.)."

STATEMENT NO. 1.—*Domestic corporations registered in the office of the executive secretary during the fiscal year 1918-19—Continued.*

Name.	Location of principal place of business.	Principal purposes.	Total authorized capital stock.	Paid-in capital with which corporation was to commence business.
Compania Cafetera y Comercial de Anasco (de cosecheros y comerciantes unidos).	Anasco.....	Buying and selling coffee and provisions.	\$100,000	\$2,500
The International Express & Foundry Co. (Inc.).	San Juan.....	Transportation and a foundry business.	150,000	85,000
Santurce Commercial Corporation..	do.....	Mercantile.....	50,000	1,000
San Juan Coal Co. 1.....	do.....	Coal.....	750,000	1,000
Carolina Tobacco Co. (Inc.).....	do.....	Growing and manufacturing tobacco.	10,000	2,000
The Mayaguez Show Co.....	Mayaguez.....	Moving pictures.....	50,000	3,000
Central Juilana (Inc.).....	Villalba.....	Sugar.....	400,000	1,000
El Banco de San Juan.....	San Juan.....	Banking.....	50,000	1,000
Banco de Yabucoa.....	Yabucoa.....	do.....	100,000	3,500
The Porto Rico Commercial Corporation.	San Juan.....	Motor vehicles and mercantile business.	100,000	1,000
Central Los Canos.....	do.....	Sugar.....	200,000	1,000
Sociedad Recreativa Larena.....	Lares.....	Amusements.....	10,000	4,000
The Thomson-Besosa Development Co. (Inc.).....	San Juan.....	Development of processes for manufacturing cements, etc.	50,000	1,300
Tio & Compania (Inc.).....	San German.....	Buying and selling sugar cane.	25,000	25,000
La Aldea Agricultural Corporation..	Arecibo.....	Sugar.....	200,000	50,400
La Nueva Libertad (Inc.).....	Guayama.....	Publishing, printing, and stationery.	12,000	1,250
Porto Rico Portland Cement Co....	San Juan.....	Manufacturing cements, etc...	150,000	1,000
Total.....			18,630,000	503,460

1 Name changed subsequently to incorporation to "The Porto Rico Coal Co."

STATEMENT NO. 2.—*Domestic corporations dissolved during the fiscal year 1918-19.*

Name.	Location of principal place of business.	Name.	Location of principal place of business.
The Bonnie Fruit Co.....	San Juan.	Insular Fruit Co.....	Arecibo.
The Providence Central Co.....	Patillas.	The National Coconut & Fiber Co. 1	San Juan.
The Enriqueta Land Co.....	Do.	Fritze, Lundt & Co. Suces. (Inc.)..	Do.
The Mabilila Mining Co. 1.....	San Juan.	Porto Rico Central Sugar Estates 1.	Do.
The Salto Grande Co. 1.....	Do.	La Democracia (Inc.).....	Do.
Concepcion Mining Co. 1.....	Do.	Revista Deportiva.....	Do.
Compania Tabacalera de Puerto Rico.	Do.	J. Padro & Bro. Co. (Inc.).....	Do.
Compania Salinera de Cabo Rojo...	Do.	San Juan Sanitary Steam Laundry (Inc.)..	Do.
Campo Alegre Fruit Co. 1.....	Do.	Las Casas Improvement Co.....	Do.
Compania Electrica Industrial (Inc.)..	San German.	Sociedad Recreativa de San Juan (Inc.)..	Do.
The Combination Co.....	Rio Piedras.		
Companis de Transporte de Maricao	Maricao.		

1 Dissolved by Joint Resolution No. 4 of the Legislature of Porto Rico, approved May 15, 1919, and effective 90 days thereafter.

STATEMENT No. 3.—Foreign corporations registered in the office of the executive secretary during the fiscal year 1918-19.

Name and location.	Agents's address.	Principal purposes.	Total authorized capital stock.	Paid in capital.
Armour Fertilizer Works, Chrome, M. J.	H. M. Porter, San Juan...	Fertilizers.....	\$2,000,000	\$1,000,000
Caribbean Film Co. (Compania de Peliculas del Caribe), Habana, Cuba.	J. P. Donohue, San Juan..	Motion picture films.	500,000	60,000
B. A. Cheney & Co. (Inc.), Richmond, Va.	Benjamin A. Cheney, San Juan.	Importing and exporting.	100,000	1,000
The Groller Society of London, New York, N. Y.	Marcus W. Purvis, San Juan.	Bookselling and publishing.	300,000	300,000
Selection Film Service (Inc.), New York, N. Y.	Pedro Amado Rivera, San Juan.	Motion picture films.	25,000	15,000
Great American Insurance Co., New York, N. Y.	Charles Rountt Hartsell, San Juan.	Insurance.....	5,000,000	5,000,000
Total.....			7,925,000	6,376,000

STATEMENT No. 4.—Foreign corporations that ceased to do business in Porto Rico during the fiscal year 1918-19.

Name.	State where organized.	Principal place of business in Porto Rico.
San Juan Ice & Refrigerating Co.....	New Jersey.....	San Juan.
Cayey-Caguas Tobacco Co.....	New York.....	Caguas.
Central Aquirre Co.....	Maine.....	Aguirre.
Captain Marquis Porto Rico Land Co.....	Pennsylvania.....	Barceloneta.
Reading Iron Co.....	do.....	San Juan.
Atlas Assurance Co. (Ltd.).....	England.....	Do.
Rojas, Niese & Co. (Inc.).....	New York.....	Do.
Armour Fertilizer Works.....	West Virginia.....	Do.
Sunnyland Fruit Co. (Inc.).....	New York.....	Aguadilla.
The Sugar Sales Corporation.....	do.....	San Juan.

STATEMENT No. 5.—Domestic associations not for pecuniary profit registered in the office of the executive secretary during the fiscal year 1918-19.

Name.	Location.	Principal purposes.
Respectable Logia Acacia No. 66.....	Barceloneta.....	Fraternal.
The Redemptorist Fathers of Porto Rico.....	Mayaguez.....	Religious and educational.
Sociedad Puertorriquena de Derecho Internacional.	San Juan.....	Promotion of study and of international law.
Partido Cuetistas Utaudenos.....	Utuaado.....	Political.
The Western Porto Rico Rebuilding Association.	Mayaguez.....	Solicitation of donations for rebuilding ing towns in Porto Rico which suffered most from earthquakes in 1918.
Asociacion de Agricultores de Canas de Azcar de Juncos, Gurabo y Las Piedras.	Juncos.....	Advancement of interest of members in their relations with outsiders.
Logia "Fidelidad" Gran Orden Unida de Odd Fellows en America.	Lajas.....	Fraternal.
Congregacion de las Madres del Sagrado Corazon de Jesus, en Puerto Rico.	San Juan.....	Religious and educational.
Union Cooperativa de Prensistas.....	do.....	Defense of its members and betterment of the printer's art.
Orquesta Juventud.....	Mayaguez.....	Musical.
Casino de Arecibo.....	Arecibo.....	Social.
Sociedad Protectora de Desamparados.....	Caguas.....	Charitable.

STATEMENT No. 6.—Domestic associations not for pecuniary profit dissolved during the fiscal year 1918-19.

Name.	Location.	Name.	Location.
Liga Progresista de Ponce.....	Ponce.	Sociedad Cooperativa Mutua "El Bien por el Bien."	Aguada.
La Caridad.....	Aibonito.	Liga de Proprietarios de Arecibo..	Arecibo.
Porto Rico Association ¹	San Juan.	"La Recompensa" Sociedad de Auxilio Mutuo.	Sabana Grande.
Asociacion del Personal Tecnico del Servicio de Sanidad de Puerto Rico. ¹	Do.	Liga Agraria.....	San Juan.
La Eglida del Maestro.....	Do.		

¹ Dissolved by joint resolution No. 4 of the legislature of Porto Rico, approved May 15, 1919, and effective 90 days thereafter.

STATEMENT No. 7.—*List of notaries public registered in the office of the executive secretary of Porto Rico on June 30, 1919.*

[Names of notaries who registered during the fiscal year 1918-19 are followed by an asterisk (*).]

Name.	Residence.	Date of registration.
Abella Blanco, Luis.....	San Juan.....	Dec. 20, 1905
Acevedo, Francisco.....	Lares.....	Mar. 2, 1914
Acosta, Mariano R.....	Aguadilla.....	Jan. 6, 1906
Acosta y Quintero, E.....	Ponce.....	Apr. 7, 1908
Aeufia Ayber, Eduardo.....	San Juan.....	Mar. 25, 1902
Agosto Abadia, Adrian.....	do.....	Apr. 22, 1910
Agrait Aldea, Ricardo.....	Arecibo.....	May 20, 1909
Alegria, Jose S.....	Manati.....	Jan. 13, 1913
Alemady, Sosa, Juan.....	Mayaguez.....	Jan. 22, 1918
Alfonso Ranza, Osvaldo.....	Utua.....	Nov. 17, 1903
Amadeo, Antonio J.....	San Juan.....	June 27, 1910
Amado, Rivera, Pedro.....	do.....	Jan. 26, 1909
Andino Espejo, Pablo *.....	do.....	Mar. 12, 1919
Antonssanti, Frank.....	do.....	Feb. 1, 1907
Aponte, Jose J. *.....	Guayama.....	July 16, 1918
Aponte, Rodriguez, Arturo.....	Humacao.....	Nov. 13, 1908
Aponte, Rodriguez, L.....	Yabucoa.....	Feb. 1, 1906
Arce Rol et, Rafael.....	Caguas.....	July 7, 1902
Ardin, Gonzalo *.....	San Juan.....	Jan. 20, 1919
Arjona Saca, Rafael.....	Ponce.....	Jan. 3, 1917
Arnaldo Sevilla, Alfredo.....	Mayaguez.....	Mar. 25, 1912
Arillaga Urrutia, R.....	Afasco.....	Oct. 22, 1916
Arroyo Figueras, Angel *.....	San Juan.....	Aug. 21, 1918
Barcelo, Antonio R.....	Fajardo.....	Aug. 16, 1916
Becerra Lacot, Luis A.....	Ponce.....	July 24, 1902
Benedicto Gaiel, Jose.....	San Juan.....	Feb. 4, 1908
Benites, Celestino.....	Humacao.....	Mar. 5, 1918
Benites Flores, Manuel.....	San Juan.....	Sept. 3, 1912
Bernardini de la Huerta, T.....	Guayama.....	June 3, 1901
Besosa, Harry F.....	San Juan.....	June 24, 1914
Blanes, Enrique.....	Mayaguez.....	Oct. 4, 1911
Blanco, Luis B. *.....	Aguadilla.....	Apr. 26, 1919
Blondet, Ricardo H. *.....	Rio Piedras.....	May 13, 1919
Brunet del Valle, Carlos.....	Juana Diaz.....	July 16, 1913
Brusi Alvarez, Alberto.....	Camuy.....	Dec. 5, 1908
Buitrago, Carlos B.....	Caguas.....	June 27, 1911
Calzada Fernandez, G.....	Fajardo.....	May 29, 1902
Campillo, Enrique.....	San Juan.....	Jan. 24, 1913
Canales Rivera, Nemesio.....	Ponce.....	Mar. 11, 1908
Capo Cintron, Eduardo.....	San Juan.....	Mar. 31, 1911
Capo Matres, Luis.....	Guayama.....	June 24, 1910
Carballeira Castellanos, I.....	San Juan.....	Feb. 1, 1912
Casaldue Golcochea, F.....	Ponce.....	Apr. 13, 1901
Casta Fornes, Geronimo.....	Afasco.....	Mar. 10, 1914
Castillo Leon, Tomas.....	Ponce.....	Dec. 2, 1907
Castro, Antonio F.....	do.....	Oct. 6, 1912
Cervon Gely, Francisco.....	Guayama.....	Nov. 10, 1910
Cintron Lastra, Rafael.....	do.....	Oct. 15, 1912
Cobales Gandia, Lorenzo.....	Hatillo.....	June 24, 1914
Cobian Romeo, Rafael.....	Bayamon.....	May 1, 1908
Coll y Cuchi, Cayetano.....	San Juan.....	May 18, 1908
Coll y Cuchi, Jose.....	do.....	July 8, 1912
Colon, Cristino R.....	Juana Diaz.....	Mar. 17, 1917
Cordero Rodriguez, R.....	Barros.....	Dec. 28, 1913
Cordoves Arana, Rafael *.....	San Juan.....	May 29, 1919
Crespo, Jr., Ulpiano.....	Arecibo.....	Oct. 27, 1913
Diaz, Jose E.....	San Juan.....	Oct. 7, 1910
Diaz, Viera, Enrique *.....	Rio Piedras.....	Mar. 5, 1919
Dominguez, Jorge V.....	San Juan.....	Dec. 15, 1910
Dominguez Rubio, Celestino.....	Guayama.....	Mar. 8, 1904
Dottin, E. H. F.....	San Juan.....	Sept. 26, 1913
Fajardo, Martinez, Pascasio.....	Mayaguez.....	Apr. 12, 1915
Felix, Leopoldo.....	do.....	May 9, 1910
Fernandez, Garcia, B.....	Cayey.....	Mar. 11, 1910
Fernandez, Jose I.....	Ponce.....	July 29, 1904
Figueras, Manuel.....	Arecibo.....	Mar. 27, 1907
Fiol, Ceron, Angel *.....	Ponce.....	Dec. 7, 1918
Flores Colon, Eduardo.....	do.....	Nov. 14, 1913
Flores, Francisco R. *.....	Utua.....	Apr. 28, 1919
Font, Eugenio *.....	San Juan.....	Mar. 31, 1919
Fores, Benito.....	San German.....	July 10, 1902
Francis, Hugh R.....	San Juan.....	Aug. 21, 1911
Franco Soto, Carlos.....	Aguadilla.....	Mar. 11, 1905
Gallardo Diaz, Fernando *.....	Humacao.....	May 29, 1919
Garcia de la Noceda, C.....	Rio Grande.....	Sept. 25, 1915
Garcia Ducos, Alberto.....	Aguadilla.....	Dec. 5, 1916
Garcia Ducos, Juan.....	do.....	Dec. 17, 1912
Garcia, Ducos, Sandallo.....	do.....	Jan. 17, 1918
Garcia Mendez, Juan B.....	do.....	Dec. 19, 1917
Garcia Mujica, Ramon.....	Carolina.....	Nov. 14, 1917
Garcia Veve, Adolfo *.....	Fajardo.....	Jan. 8, 1919
Garcia, Veve, Angel.....	do.....	Apr. 1, 1902
Garcia Yanguas, Aurelio.....	San German.....	Dec. 18, 1917

STATEMENT No. 7.—*List of notaries public registered in the office of the executive secretary of Porto Rico on June 30, 1919—Continued.*

Name.	Residence.	Date of registration.
Geigel, Juan Eugenio.....	Mayaguez.....	Oct. 13, 1904
Geigel, Fernando J.....	San Juan.....	May 2, 1919
Gimenez, Francisco.....	Ponce.....	Apr. 12, 1910
Gimenez Garcia, Lorenzo.....	Caguas.....	July 11, 1903
Gomez, Jose I.....	Arecibo.....	Aug. 26, 1904
Gonzales Darder, Enrique.....	San Juan.....	July 3, 1905
Gonzalez Fagundo, Francisco.....	Humacao.....	Jan. 10, 1911
Gonzalez, Pedro.....	San Juan.....	Jan. 27, 1909
Gonzalez Gonzales, Julio C.....	do.....	Nov. 26, 1903
Gonzalez Lopez, Martin.....	San Lorenzo.....	Feb. 11, 1901
Gonzalez Mena, Enrique.....	Aguadilla.....	June 19, 1911
Guerra, Benjamin*.....	San Juan.....	July 29, 1918
Guerra, Gabriel.....	do.....	Feb. 9, 1908
Guerra, Miguel.....	do.....	May 23, 1910
Guevara Muñoz, Jose.....	San Sebastian.....	May 8, 1917
Guilermety, Rafael.....	San Juan.....	Feb. 20, 1906
Guzman Benitez, Jose de.....	do.....	Sept. 10, 1914
Guzman Bealitz, Juan de.....	do.....	July 6, 1901
Guzman, Miguel.....	do.....	Feb. 3, 1913
Hernandez, Ignacio.....	Salinas.....	Dec. 22, 1916
Hernandez Lopez, Juan.....	Rio Piedras.....	Nov. 25, 1902
Spool 66 Outcault 68.....	San Juan.....	June 12, 1906
Hernandez Usua, Jose.....	San Juan.....	Jan. 23, 1913
Holton, Benjamin J.....	Mayaguez.....	June 30, 1911
Huyke, Juan B.....	Humacao.....	Dec. 28, 1916
Igartua Aviles, Victor.....	Quebradillas.....	June 20, 1911
Igartu, Celestino, jr.....	San Juan.....	May 28, 1919
Janer Landron, Luis*.....	Mayaguez.....	May 13, 1914
Jesus, Angel R. de.....	San Juan.....	Nov. 15, 1913
Jimenez Rivera, F.....	Arecibo.....	May 22, 1913
Iefebre, Enrique.....	San Juan.....	Dec. 9, 1913
Leon Iugo, Sergio.....	Juana Diaz.....	Jan. 19, 1901
Leon, Rafael.....	Ponce.....	Mar. 28, 1918
Llorens Torres, Luis.....	San Juan.....	May 29, 1918
Lopez Acosta, Eusebio.....	San German.....	Dec. 26, 1918
Lopez Antongiorgi, Rafael*.....	Humacao.....	Apr. 20, 1918
Lopez de Victoria, Gilberto.....	Yauco.....	Sept. 18, 1903
Lopez Gastambide, Eugenio.....	San Juan.....	Feb. 10, 1914
Lopez Tizol, Eduardo.....	do.....	Feb. 11, 1913
Marin Marien, Alberto.....	do.....	Do.
Marin Marien, Eduardo.....	Utuado.....	Mar. 9, 1909
Marquez Abrams, Lemuel.....	Quebradillas.....	Dec. 24, 1908
Marquez Huertas, Enrique.....	Bayamon.....	Nov. 4, 1910
Martinez Alvarez, Rafael.....	San Juan.....	Jan. 14, 1909
Martinez Pavila, Jose.....	do.....	Jan. 10, 1911
Martinez Pavila, Manuel A.....	Guayama.....	Mar. 6, 1914
Martinez, Fernando E.....	San Lorenzo.....	Dec. 29, 1915
Martinez, Frank.....	San Juan.....	Jan. 10, 1911
Martinez, Jose C.....	do.....	Jan. 14, 1913
Martinez Nadal, Rafael.....	Ponce.....	July 30, 1902
Martinez Rivas, Carmelo.....	do.....	Feb. 7, 1913
Mas, Felix C.....	Carolina.....	Feb. 20, 1912
Mena La Torre, Andres.....	Caguas.....	June 5, 1901
Mendez Vaz, Luis.....	Mayaguez.....	Oct. 17, 1911
Mendin Sabat, Luis.....	Caguas.....	Oct. 17, 1912
Mercader, Luis.....	Aguadilla.....	Feb. 18, 1913
Miranda, Herminio.....	Arecibo.....	Jan. 17, 1902
Monserat Simo, Pambian.....	San Juan.....	June 19, 1906
Monserat Suro, Pambian.....	do.....	Sept. 16, 1916
Montalvo Guenard, Luis.....	Mayaguez.....	May 18, 1912
Morales Acosta, Ignacio.....	Bayamon.....	Jan. 27, 1914
Morales, Miguel Marcos.....	Cayey.....	Jan. 14, 1913
Moscoso, Guillermo H.....	Mayaguez.....	Mar. 17, 1909
Munoz Morales, Luis.....	San Juan.....	June 28, 1919
Munoz Ramos, Rafael*.....	do.....	Jan. 14, 1913
Navarro Ortiz, Francisco.....	Cayey.....	July 19, 1901
Nazario de Figueroa, Joaquin.....	San German.....	May 1, 1911
Nazario Lugo, Amadeo.....	Yauco.....	June 16, 1919
Negron Benitez, Eduardo*.....	Rio Piedras.....	Feb. 18, 1913
Nogueras, Juan B.....	Cayey.....	June 29, 1906
Oller Diaz, Jose.....	Bayamon.....	Jan. 7, 1918
Otero Rivera, Francisco.....	Mayaguez.....	Feb. 2, 1917
Padilla, Felix Luis.....	Juana Diaz.....	Feb. 27, 1904
Padro, Angel.....	Arecibo.....	Apr. 21, 1919
Padro Pares, Rafael*.....	Rio Piedras.....	July 29, 1901
Palacios y Rodriguez, R.....	San Juan.....	Oct. 4, 1901
Palmer, Santiago B.....	do.....	Mar. 8, 1901
Parra, Francisco.....	Ponce.....	Nov. 9, 1906
Pasarelli y Rius, Augusto.....	do.....	Nov. 20, 1906
Paz Urdaz, Manuel.....	Arecibo.....	Feb. 8, 1915
Paz y Ruiz, Tomas.....	Rio Grande.....	Feb. 21, 1918
Perello Quinones, Luis.....	Humacao.....	Jan. 22, 1909
Perez, Celestino J.....	Comerio.....	Dec. 21, 1917
Perez Mercado, Rafael B.....	Ponce.....	

STATEMENT No. 7.—List of notaries public registered in the office of the executive secretary of Porto Rico on June 30, 1919—Continued.

Name.	Residence.	Date of registration.
Pena, Abraham.	San Juan.	Mar. 1, 1917
Piñero Rodríguez, Antonio.	Quebradillas.	Nov. 6, 1915
Piñero Rodríguez, Fulgencio.	Juncos.	Jan. 25, 1912
Polanco de Jesus, Valentin.	Manati.	Jan. 13, 1913
Ponsa Pares, Enrique.	San Juan.	Mar. 16, 1911
Poventud, Alberto S.	Ponce.	Feb. 15, 1917
Prado Morales, Francisco.	Manati.	June 29, 1901
Quintana Cajal, Alfonso.	Coamo.	Dec. 9, 1913
Quinones y Quinones, Ramon.	Mayaguez.	June 4, 1901
Ramírez de Arellano, F.	San Juan.	Apr. 27, 1908
Ramírez Santibañez, Jose.	do.	Feb. 6, 1918
Ramírez Vigo, Rodolfo.	Mayaguez.	Feb. 17, 1903
Ramos, Jose C.	Guayama.	Mar. 3, 1906
Richard del Valle, Arturo.	Aguadilla.	Mar. 12, 1906
Richard del Valle, Augusto.	do.	Apr. 18, 1910
Riera Palmer, Mariano.	Mayaguez.	Jan. 14, 1901
Rincon, Enrique.	San Juan.	Nov. 14, 1912
Rivera, Manuel A.	Coamo.	Nov. 20, 1905
Rodríguez, Antonio.	Guayama.	Dec. 17, 1913
Rodríguez, Artemio P.	San Juan.	Dec. 13, 1910
Rodríguez Bermudez, Jose M.	Arecibo.	Dec. 12, 1917
Rodríguez Cebollero, Jose C.	Manati.	Apr. 13, 1910
Rodríguez, Gustavo.	Ponce.	July 7, 1904
Rodríguez, Jose D.	Lares.	Dec. 23, 1913
Rodríguez, Juan Z.	Arecibo.	Jan. 11, 1901
Rodríguez Ortiz, V. F.	Cayey.	Mar. 9, 1908
Rodríguez, Ramon P.	San Juan.	Feb. 17, 1914
Rodríguez Flores, Ramon H.	Rio Piedras.	Dec. 29, 1916
Rodríguez Rivera, Vicente.	Cayey.	Jan. 24, 1913
Rodríguez Serra, Manuel.	San Juan.	Nov. 8, 1906
Roman Font, Abelardo.	San Sebastian.	Feb. 12, 1918
Rosy, Manuel F.	San Juan.	Feb. 17, 1909
Roura, Mr. Ramon.	Mayaguez.	Mar. 4, 1901
Ruiz de Val, Jose.	Rio Piedras.	Feb. 10, 1917
Rola, Carlos M.	Fajardo.	Oct. 11, 1909
Rubater, Jose.	Mayaguez.	Feb. 24, 1911
Ruizup Colon, Manuel A.	Ponce.	Apr. 7, 1903
Sanchez Vahamonde, Luis.	Rio Grande.	Jan. 18, 1918
Sanchez Montalvo, Rafael.	do.	Dec. 28, 1904
Santana, Pedro, Jr.	San Juan.	May 27, 1913
Santiago Carmona, Leopoldo.	Comerio.	June 13, 1908
Santoni, Felix.	Arecibo.	Apr. 6, 1904
Saiz y Rosal, James C.	Ponce.	Nov. 25, 1908
Saca, Ramon, Jr. *	San Juan.	May 7, 1919
Saca Pacheco, Ramon.	do.	Oct. 26, 1914
Saiz, Jaime.	do.	Apr. 18, 1910
Saldavia, Ismael *	Rio Piedras.	May 28, 1919
Sato Graa, Francisco.	San Juan.	Apr. 18, 1910
Sato, Juan B.	do.	Oct. 28, 1910
Sato Rivera, Jose *	Rio Piedras.	June 4, 1919
Schmidt, Echevarria, O.	Mayaguez.	Apr. 13, 1918
Sean Carbonell, Salvador.	San Juan.	June 9, 1906
Silveras Rivera, Antonio.	Arecibo.	Nov. 11, 1903
Sinthes, Pedro C.	San Juan.	June 25, 1913
Sold, Roberto H.	do.	July 30, 1908
Soriano Garcia, Leopoldo.	Ponce.	May 5, 1913
Soto Colberry, Miguel del.	Cabo Rojo.	Oct. 5, 1910
Soto Fernandez, C. del.	do.	Apr. 27, 1910
Soto, P. Manuel.	Ponce.	Jan. 3, 1906
Soto Soler, Ricardo del.	Cabo Rojo.	Jan. 22, 1909
Soto Vendrell, Rafael.	Ponce.	Mar. 1, 1901
Soto Garrido, Francisco.	San Juan.	Jan. 16, 1916
Soto Gran, Libertad *.	Yauco.	Oct. 14, 1918
Soto, Jose G.	San Juan.	Dec. 26, 1905
Soto Mouge, Sordallo.	do.	June 30, 1915
Soto Pons, Tomas.	Ponce.	Apr. 23, 1918
Soto Salaberry, Jose Q.	Salinas.	May 1, 1913
Soto, Heriberto.	Rio Piedras.	Dec. 18, 1916
Soto, Jose.	Ponce.	Jan. 4, 1907
Soto, Manuel.	San Juan.	Mar. 11, 1909
Sotelo, Carlos.	Humacao.	June 23, 1910
Sotelo Nava, Martin.	San Juan.	Oct. 6, 1905
Sotillo Gull, Antonio.	do.	May 31, 1912
Sotillo, Carlos V.	Anasco.	Mar. 7, 1912
Soto Cajal, Ulpiano.	Humacao.	Feb. 24, 1903
Sotomayor, Angel A.	Mayaguez.	Oct. 4, 1910
Sotomayor, Joaquin.	Humacao.	Jan. 21, 1913
Sotomayor, Luis *	San Juan.	Mar. 12, 1919
Sotomayor, Charles, Luis.	Barranquitas.	Jan. 22, 1918
Sotomayor, O. M.	San Juan.	Oct. 17, 1910
Sotomayor, Luis.	Ponce.	Feb. 26, 1913
Sotomayor, Miguel.	Guayama.	Nov. 11, 1902
Sotomayor, Vicente.	Ponce.	Nov. 12, 1912
Sotomayor, Gustavo.	Arecibo.	Oct. 3, 1916

STATEMENT No. 8.—Bureau of weights and measures—Table showing work accomplished daily and

	Scales.												Weights.			
	Counter.				Spring.				Platform.				Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.
	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.				
Adjuntas:																
Insular inspection.....	107	4		5	11		5		130	1	72	1	766	44	265	7
Municipal inspection.....	5			1	5		1	1	3		2		368		34	4
Total.....	112	4		6	16		6	1	133	1	74	1	1,134	44	299	80
Aguada:																
Insular inspection.....	17								8		1		106		86	
Municipal inspection.....	59				4				25				559		149	4
Total.....	76				4				33		1		664		235	4
Aguadilla:																
Insular inspection.....	75		3		1		1		49		2		538		251	
Municipal inspection.....	60		3	2	3			1	15		6		541		201	50
Total.....	135		6	2	4		1	1	64		8		1,079		452	50
Aguas Buenas:																
Insular inspection.....	42		2	1	9			1	6				297	68	96	7
Municipal inspection.....																
Total.....	42		2	1	9			1	6				297	68	96	7
Albionito:																
Insular inspection.....	87		1	1	32			1	90		4	1	916		244	20
Municipal inspection.....	2			1					2				15			
Total.....	89		1	2	32			1	92		4	1	931		244	20
Añasco:																
Insular inspection.....									9	2	2		10			
Municipal inspection.....	90	1	4		6				25		1		271	43	442	14
Total.....	90	1	4		6				34	2	3		281	43	442	14
Arecibo:																
Insular inspection.....	110		27	1	3		5		26		13		720	1	306	154
Municipal inspection.....	311		29	3	15		3	2	72		8		3,716		548	132
Total.....	421		56	4	18		8	2	98		21		4,436	1	854	176
Arroyo:																
Insular inspection.....	48			3	11				4	27		1	542		48	2
Municipal inspection.....		2			1	3			1		7		24	37		
Total.....	48	2		3	12	3			5	27	7	1	566	37	48	2
Barceloneta:																
Insular inspection.....	19		5		1				6		4		140		66	18
Municipal inspection.....	31		1	1	13		1		5				178		88	18
Total.....	50		6	1	14		1		11		4		318		154	36
Barranquitas:																
Insular inspection.....	49		2		20				6			1	401		262	
Municipal inspection.....																
Total.....	49		2		20				6			1	401		262	
Barros:																
Insular inspection.....	54	3	9		12				4	3		1	500	13	191	3
Municipal inspection.....	58		3		10				8				414		72	18
Total.....	112	3	12		22				12	3		1	914	13	263	21

in each municipality by insular and municipal inspectors, respectively, according to fortnightly reports.

Measures.				Miscellaneous. ¹				Totals.				Packages.		
Linear.		Liquid.												
Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Heavy.	Correct.	Light.
198 8		7	31 2	13 1	2	1		1,240 391	49	343 37	102 7	156 2,819	198 4,212	51 927
201		7	33	14	2	1		1,631	49	380	109	2,975	4,410	978
18 81		2	5 32					153 760		81 148		10 4,002	14 16,009	1 2,036
99		2	37					913		229	6	4,012	16,023	2,037
34 50			10 20	5 6	1		1	707 689	1	262 216		12 246	157 580	17 108
54			30	11	1		1	1,396	1	478	54	259	737	126
96		1	38	1				487	68	99	10	10 232	43 367	26 42
96		1	38	1				487	68	99	10	242	410	67
226		5	72		13			1,423 19		249	41 1	159	23 2,064	37
226		5	72		13			1,442		249	42	159	2,077	37
91		5	22	7		1		19 506	2 44	2 454		17 18,638	67 18,682	1 1,903
91		5	22	7		1		525	46	456	19	18,555	18,740	1,904
218 233	8 3	35 8	28 329	1 10	9	10	5 1	1,115 4,726	1	457 601	200 135	19 113	445 2,018	46 153
501	11	43	357	11	9	10	5 1	5,841	1	1,068	335	132	2,463	199
92 2		1	33 2			2		755 29		49	36 1	360 2,600	48 4,160	115 2,770
94		1	35			2		784	49	49	37	2,960	4,208	2,885
23 30		7 1	8 6		4 2			197 263		75 40	30 93	4	64 1,593	4
53		8	14		6			460		115	123	4	1,657	4
141		2	51		6	9		677		264	9		79	11
141		2	51		6	9		677		264	9		79	11
214 51		2 1	70 32		7	41		904 603	19 75	200 75	12 15	25 240	40 360	..... 130
205		3	102		7	41		1,507	19	275	27	265	400	130

¹ Computing scales, coffee measures, measuring pumps, glass graduates, and milk bottles and jars.

STATEMENT No. 8.—Bureau of weights and measures—Table showing work accomplished daily and fortnightly

	Scales.												Weights.			
	Counter.				Spring.				Platform.				Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.
	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.				
Bayamón:																
Insular inspection.....									4				15			
Municipal inspection.....	197	5	98	9	88	4	38	6	67	4	6		2,011		381	12
Total.....	197	5	98	9	88	4	38	6	71	4	6		2,026		381	12
Cabo Rojo:																
Insular inspection.....	85		1		2		1		24	4	1		608		208	1
Municipal inspection.....	166	1			3	1			19		1		976		381	1
Total.....	251	1	1		5	1	1		43	4	2		1,672		489	2
Caguas:																
Insular inspection.....	260		9	6	65		13	10	134	2	49	4	2,526	10	1,084	108
Municipal inspection.....	52		2	1	7				35				1,158		42	22
Total.....	312		11	7	72		13	10	169	2	49	4	3,684	10	1,127	126
Camuy:																
Insular inspection.....	70		19	2	1			1	28		6	1	499		267	147
Municipal inspection.....	113		7	1				1	5		1		949		55	145
Total.....	183		26	3	1			2	33		7	1	1,448		312	292
Carolina:																
Insular inspection.....	55		4	2	22	3	5	2	26		4		567	4	212	42
Municipal inspection.....	24		2		19			1	7		1		284		47	54
Total.....	79		6	2	41	3	5	3	33		5		841	4	259	96
Gayey:																
Insular inspection.....																2
Municipal inspection.....	176				65		1	1	52				1,621		219	15
Total.....	176				65		1	1	52				1,621		219	17
Celba:																
Insular inspection.....	25				6	1	2	1	11		1		170	14	58	4
Municipal inspection.....					1											
Total.....	25				7	1	2	1	11		1		170	14	58	4
Ciales:																
Insular inspection.....	76	3	12	3	8		1	2	38		8		780		401	60
Municipal inspection.....	9								5				135			
Total.....	85	3	12	3	8		1	2	43		8		915		401	60
Cidra:																
Insular inspection.....	69			2	4				20		5	1	657		114	8
Municipal inspection.....	8								1				61			
Total.....	77			2	4				21		5	1	718		114	8
Coamo:																
Insular inspection.....	37		13	1					8	2	1		138	2	98	234
Municipal inspection.....	2	23			2	1			25	2			206	28	99	137
Total.....	39	23	13	1	2	1			33	4	1		344	30	197	371
Comerio:																
Insular inspection.....	60	2	15	5	24			1	25		3		547	11	361	54
Municipal inspection.....					1				1				28			10
Total.....	60	2	15	5	25			1	26		3		575	11	361	64

in each municipality by insular and municipal inspectors, respectively, according to reports.—Continued.

Measures.				Miscellaneous.				Totals.				Packages.			
Linear.		Liquid.													
Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Heavy.	Correct.	Light.	
2	248		5	23				22				105	79	28	
251			5	23				2,634	13	518	32	221	2,222	87	
251			5	23				2,656	13	518	32	326	2,301	116	
28				13				850	4	272	1	31	98		
150				21			2	1,335	2	382	1	1,298	7,459	626	
178				34			2	2,185	6	654	2	1,324	7,557	626	
678	35	41		137		34	10	3,810	12	1,190	198	1,472	1,311	391	
226	8	2		26		5	2	1,508		53	30	174	1,009	108	
904	43	43		163		39	12	5,316	12	1,243	228	1,646	2,320	499	
181	3	32		55		12	4	838		287	196	42	185	15	
109		3		30		6		1,206		63	156	622	379	99	
290	3	36		85		18	4	2,044		350	352	664	564	114	
191				51		4	3	905	7	225	50	66	121	31	
42				24		1		397		50	56	4,855	2,255	1,232	
233				72		5	3	1,302	7	275	106	4,921	2,376	1,263	
238				84		3		2,286		220	19	4,773	10,234	272	
296				84		3		2,286		220	21	4,777	10,241	443	
52				9		1	1	274	15	61	6	12	121	1	
52								1				8	804	3	
52				9		1	1	275	15	61	6	20	925	4	
220		25		49		10	1	1,172	3	422	100	148	118	41	
								149				1,460	640	162	
220		25		49		10	1	1,321	3	422	100	1,608	758	203	
122		4		42		4		914		119	19	806	49	111	
3				9				82				612	3,569	270	
125		4		51		4		906		119	19	1,419	3,618	381	
110		13		3		7	2	298	5	112	255	42	243	15	
67		1		16		2	1	318	54	99	140	1,378	9,107	70	
177		14		19		9	2	616	50	211	395	1,320	9,440	85	
158		16		46		1	20	861	13	380	99	208	184	69	
								30			16	69	663	52	
158		16		46		1	20	891	13	280	109	277	867	121	

STATEMENT NO. 8.—Bureau of weights and measures—Table showing work accomplished daily and fortnightly

	Scales.												Weights.			
	Counter.				Spring.				Platform.							
	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.
Corozal:																
Insular inspection.....	65		2		18				8				650		217	2
Municipal inspection.....																
Total.....	65		2		18				8				650		217	2
Culebra:																
Insular inspection.....	3	1	1						2				43			16
Municipal inspection.....																
Total.....	3	1	1						2				43			16
Dorado:																
Insular inspection.....	19		5	2	2				5	1	1		142		109	12
Municipal inspection.....	80		2	2	7			1	21				690		42	21
Total.....	99		8	4	9			1	26	1	1		832		151	33
Fajardo:																
Insular inspection.....	114		11	1	45		1	8	83		11		1,336		330	11
Municipal inspection.....	12				25		2		6				273			
Total.....	126		11	1	70		3	8	89		11		1,609		330	11
Guánica:																
Insular inspection.....	66				2				12	3			378		65	8
Municipal inspection.....	48				4				22				465			
Total.....	114				6				34	3			843		65	8
Guayama:																
Insular inspection.....	10				4				14	5	1		120		9	18
Municipal inspection.....	97				40		1	2	32				864		4	15
Total.....	107				44		1	2	46	5	1		984		13	33
Guayanilla:																
Insular inspection.....	29		5		3		1	1	6	3	3		319		53	26
Municipal inspection.....	5								3				68			
Total.....	34		5		3		1	1	9	3	3		387		53	26
Guaynabo:																
Insular inspection.....	14	1	4	1	3	1			4	1	1		145		63	7
Municipal inspection.....	33		2		12				10				370		108	6
Total.....	47	1	6	1	15	1			14	1	1		515		171	13
Gurabo:																
Insular inspection.....	35				12				7	9			260		42	7
Municipal inspection.....	28		1	3	5								267		128	13
Total.....	63		1	3	17				7	9			527		170	20
Hatillo:																
Insular inspection.....	12		4		1				5		10	2	126		66	2
Municipal inspection.....	25		5		4		1	1	4				177		76	
Total.....	37		9		5		1	1	9		10	2	303		141	2
Hormigueros:																
Insular inspection.....	11								5	1			88		9	
Municipal inspection.....	39				1				17				326			
Total.....	50				1				22	1			414		9	

in each municipality by insular and municipal inspectors, respectively, according to reports—Continued.

Measures.				Miscellaneous.				Totals.				Packages.		
Linear.		Liquid.												
Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Heavy.	Correct.	Light.
202		3	54		2	16		1,073		219	7	39	76	1
262		3	54		2	16		1,073		219	7	39	76	1
28			4		1			75	1	1	17		9	
28			4		1			75	1	1	17		9	
65		1	10		1			243	1	115	16	2	29	21
179		1	40		1			1,017		46	25	501	1,416	43
244		2	50		1	1		1,260	1	161	41	503	1,445	64
188		2	50		2	9	8	1,813		375	31	155	470	262
3			5					324		2		1,782	8,703	56
171		2	64		2	9	8	2,137		377	31	1,937	9,173	318
40			10					508	3	65	8	10	23	
44			22					606				136	4,007	5
84			32					1,113	3	65	8	146	4,030	5
1	1	2	143			1	6	293	5	11	26	282	89	30
132			37					1,202		5	18	1,313	2,636	43
133	1	2	180			1	6	1,495	5	16	44	1,595	2,725	73
20		1	8		2	20	4	424	3	68	27	74	208	37
			2					78				80	765	10
30		1	10		2	20	4	502	3	68	27	154	973	47
62			18		1	3		246	3	69	11	50	71	17
115			36		1			576		110	63	664	2,767	102
177			54		1	4		822	3	179	74	714	2,838	119
25			14		1			363	9	42	74	26	38	15
56			18		1			373		129	16	1,000	4,914	402
90			32		2			726	9	171	90	1,026	4,962	417
22	3	2	7		2			175		82	9		32	51
59		1	22		1			291		82	2		3,647	17
81	3	3	29		3			466		164	11		3,679	68
11			2					117	1	9		11	35	
9			4					396					7,330	
20			6					513	1	9		11	7,865	

STATEMENT No. 8.—Bureau of weights and measures—Table showing work accomplished daily and fortnightly

	Scales.												Weights.			
	Counter.				Spring.				Platform.							
	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.
Humacao:																
Insular inspection.....	125	...	1	1	23	...	1	2	41	1	7	2	1,144	...	375	86
Municipal inspection....	139	...	2	...	35	...	...	1	37	...	7	...	1,065	...	82	35
Total.....	258	...	3	1	58	...	1	3	78	1	14	2	2,210	...	457	130
Isabela:																
Insular inspection.....	52	4	3	1	...	...	...	...	24	...	6	...	251	57	268	38
Municipal inspection....	98	2	...	...	18	...	...	...	28	6	...	...	675	399	47	...
Total.....	150	6	3	1	18	...	...	...	52	6	6	...	926	446	316	30
Jayuya:																
Insular inspection.....	70	1	3	2	7	...	1	2	22	4	3	...	700	39	117	1
Municipal inspection....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	70	1	3	2	7	...	1	2	22	4	3	...	700	39	117	1
Juana Diaz:																
Insular inspection.....	86	...	8	2	13	...	...	...	8	3	6	1	706	...	195	28
Municipal inspection....	83	...	4	6	6	...	...	2	22	...	1	1	536	...	32	174
Total.....	169	...	12	8	19	...	...	2	30	3	7	2	1,242	...	287	202
Juncos:																
Insular inspection.....	56	...	10	...	17	...	...	2	15	1	20	...	414	...	218	108
Municipal inspection....	73	...	10	...	14	1	...	...	60	2	16	...	945	...	237	22
Total.....	129	...	20	...	31	1	...	2	75	3	36	...	1,359	...	455	130
Lajas:																
Insular inspection.....	45	...	...	...	1	...	...	1	27	2	4	...	296	...	108	...
Municipal inspection....	85	...	...	...	...	...	...	...	3	...	...	...	718	...	90	...
Total.....	130	...	...	...	1	...	...	1	30	2	4	...	1,016	...	198	...
Lares:																
Insular inspection.....	61	...	22	2	7	...	3	1	13	...	9	...	311	...	294	202
Municipal inspection....	55	...	10	1	6	...	...	1	36	...	4	...	642	...	205	20
Total.....	116	...	32	3	13	...	3	2	49	...	13	...	953	...	499	222
Las Marias:																
Insular inspection.....	10	...	...	...	...	...	...	...	5	1	...	...	108	...	1	...
Municipal inspection....	62	...	...	...	4	...	...	...	11	...	...	...	489	...	343	...
Total.....	72	...	...	...	4	...	...	...	16	1	...	...	597	...	344	...
Las Piedras:																
Insular inspection.....	58	...	15	2	4	...	2	4	2	...	...	...	278	...	108	257
Municipal inspection....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	58	...	15	2	4	...	2	4	2	...	...	...	278	...	108	257
Loiza:																
Insular inspection.....	47	2	4	...	5	...	1	...	22	3	2	...	360	...	196	8
Municipal inspection....	7	...	1	...	2	...	1	...	...	...	...	1	45	...	27	1
Total.....	54	2	5	...	7	...	2	...	22	3	2	1	405	...	223	9
Luquillo:																
Insular inspection.....	20	1	1	...	2	...	...	...	6	...	...	...	148	20	49	2
Municipal inspection....	2	...	...	...	2	...	...	1	...	...	...	...	8	...	...	...
Total.....	22	1	1	...	4	...	...	1	6	...	...	...	156	20	49	2

in each municipality by insular and municipal inspectors, respectively, according to reports—Continued.

Measures.				Miscellaneous.				Totals.				Packages.					
Linear.		Liquid.															
Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Heavy.	Correct.	Light.			
125 46			16	54 11			4	8		1	1,521 1,327	1	385 91	120 86	594 108	332 2,464	48 72
171			16	65			4	8		1	2,848	1	476	156	624	2,796	120
104 169		1	17	36 76			4	3		2	470 1,055	61 397	279 47	54		154 3,397	
264		1	17	112			4	3		2	1,525	458	326	54	3	4,051	
146				36			11	3			964	44	124	16		88 1,278	24
146				36			11	3			964	44	124	16		1,366	24
151 200			7	23 56			2				987 903	3	209 97	38 185	37 697	70 3,304	7 3,045
351			7	79			2				1,890	3	806	223	734	3,374	3,052
88 96		3	11	19 85		4	10				609 1,273	1	255 267	131 28	87 112	176 3,234	47 43
184		3	12	104		8	10				1,882	4	522	154	199	3,410	90
54 101				4 7							429 914	2	112 90	1	44 665	128 1,880	1 78
155				11							1,343	2	202	1	709	2,008	74
107 81			25	4 28			2				503 849		328 221	232 23	12 110	390 3,101	467
188			25	32		2	2				1,352		549	254	122	3,491	471
13 56				2 6							138 628	1	1 343		16 123	45 767	9
69				8							766	1	344		139	812	9
74			18	7			9			1	423		121	290	36 794	170 3,964	25 416
74			18	7			9			1	423		121	290	830	4,154	441
108 10				35 5		1	4	2			574 69	5	204 29	10 2	19 336	52 962	79
113				40		1	4	2			643	5	233	12	348	1,014	79
39				12 2			1	1			228 14	21	50	3 1	18 112	27 501	200
39				14			1	1			242	21	50	4	130	528	200

STATEMENT NO. 8.—Bureau of weights and measures—Table showing work accomplished daily and fortnightly

	Scales.												Weights.			
	Counter.				Spring.				Platform.							
	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.
Manati:																
Insular inspection.....	39	1							16	2			331	8	158	58
Municipal inspection.....	121	2			9				17	2			983		345	42
Total.....	160	3			9				33	4			1,314	8	503	100
Maricao:																
Insular inspection.....	29	1							10	1			170		116	1
Municipal inspection.....	31								3				324		138	
Total.....	60	1							13	1			494		254	1
Maunabo:																
Insular inspection.....	38				12	1			10		3		340		104	1
Municipal inspection.....	21		2		3		1		2	3			115	191	57	2
Total.....	59		2		15	1	1		12	3	3		455	191	161	3
Kayaguez:																
Insular inspection.....	9		1		2				46	6	2		295	1	26	
Municipal inspection.....	471	18			107	8	1		120		7		4,455		1,326	57
Total.....	480	18	1		109	8	1		166	6	9		4,750	1	1,352	57
Moca:																
Insular inspection.....	30	5			1				4	5			147		98	34
Municipal inspection.....	3												128		6	12
Total.....	33	5			1				4	5			275		102	46
Morovis:																
Insular inspection.....	54	4			4				18				418		197	18
Municipal inspection.....													148		13	
Total.....	54	4			4				18				566		210	18
Naguabo:																
Insular inspection.....	64	1	5		20	1	1	3	14		5		340		235	43
Municipal inspection.....	3				14	1		5	4				160	3		25
Total.....	67	1	5		34	2	1	8	18		5		500	3	235	68
Naranjito:																
Insular inspection.....	49	2			20				6				401		262	
Municipal inspection.....																
Total.....	49	2			20				6				401		262	
Patillas:																
Insular inspection.....	83				9				23	1			886		140	27
Municipal inspection.....																
Total.....	83				9				23	1			886		140	27
Penuelas:																
Insular inspection.....	85	1	6	3	3	1		3	10	2	3	1	626		161	57
Municipal inspection.....																
Total.....	85	1	6	3	3	1		3	10	2	3	1	626		161	57
Ponce:																
Insular inspection.....									4	6	1		12	2		
Municipal inspection.....	669	36	5		419	33	6		221		49		10,735		1,837	147
Total.....	669	36	5		419	33	6		225	6	50		10,747	2	1,837	147

in each municipality by insular and municipal inspectors, respectively, according to reports—Continued.

Measures.				Miscellaneous.				Totals.				Packages.		
Linear.				Liquid.										
Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Heavy.	Correct.	Light.
59			6	22			9	467	8	161	74	128	128	84
251			2	25				1,406		349	44	687	5,553	71
310			8	47			9	1,873	8	510	118	815	5,681	155
43				12				264	1	117	1	10	42	
32				2			1	398		138	1	256	3,628	167
76				14			1	657	1	255	2	266	3,670	167
58				27			1	485		108	2	231	28	19
32			1	9			1	182	194	87	7	6,107	4,368	2,707
90			1	36			2	667	194	195	9	6,338	4,397	2,726
91							3	446	11	28	1	1,831	8,276	3
1,512			8	1,556			196	8,222		1,859	292	1,091	12,848	54
1,806			8	1,556			196	8,668	11	1,887	293	2,922	21,124	91
44			2	2			1	229		106	36		101	
								131		6	12	249	1,398	22
44			2	2			1	360		112	48	249	1,499	22
128				32			5	672		201	23	16	88	5
							18	148		13		191	691	16
128				32			5	820		214	23	207	779	21
74			9	24			5	538	2	252	64	8	155	
				3	2		9	184	6		30	4,341	6,349	843
74			9	27	2		5	722	8	252	94	4,349	6,504	843
141			2	51			6	677		264	9	45	46	
141			2	51			6	677		264	9	45	46	
125			2	28			4	1,168		141	33	458	5	13
125			2	28			4	1,168		141	33	458	5	13
148			14	16			7	897	4	171	115	5	257	16
148			14	16			7	897	4	171	115	5	257	16
2,593			7	16			2	1,583		47	16			
				1,178			2	17,367	8	1,964	221	625	28,335	245
2,593			7	16			2	1,583		47	17,373	8	1,965	221
				1,178			2					625	28,335	245

STATEMENT No. 8.—*Bureau of weights and measures—Table showing work accomplished daily and fortnightly*

	Scales.												Weights.				
	Counter.				Spring.			Platform.					Correct.	Corrected	Condemned for repairs.	Condemned and confiscated.	
	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.					
Quebradillas:																	
Insular inspection	58		16						9		4			344		200	44
Municipal inspection	130	2	7	1	4				8					1,256		98	32
Total	188	2	23	1	4				17		4			1,600		394	76
Rincon:																	
Insular inspection	14								15					73		64	
Municipal inspection	55								7					393	80	39	2
Total	69								22					466	80	103	2
Rio Grande:																	
Insular inspection	60	2	3	1	12		1	1	13	4	10			543	69	129	7
Municipal inspection																	
Total	60	2	3	1	12		1	1	13	4	10			543	69	129	7
Rio Piedras:																	
Insular inspection	1								1		1			64			
Municipal inspection	123	13	73		49	8	17		36	3	5			1,173	116	684	49
Total	124	13	73		49	8	17		37	3	6			1,237	116	684	49
Sabana Grande:																	
Insular inspection	51				1				13					289		259	
Municipal inspection	29				1									144	263		
Total	80				2				13					433	263	259	
Salinas:																	
Insular inspection	6		5						3					60		16	23
Municipal inspection	65		1	2	7		1	1	13					409		205	31
Total	71		6	2	7		1	1	16					469		221	64
San German:																	
Insular inspection	88				4				52	5	1			538		317	5
Municipal inspection	99				1				3					1,149			
Total	187				5				55	5	1			1,687		317	5
San Juan:																	
Insular inspection	262	4	59	13	897		47	13	186	5	41		5,357	1	1,708	423	
Municipal inspection	209		31	2	368		76		86		10		1,677		701	362	
Total	471	4	90	15	1,265		123	13	272	5	51		6,104	1	2,404	815	
San Lorenzo:																	
Insular inspection	111		4		8				23		2		1,006		131	8	
Municipal inspection	28				4				9				151			2	
Total	139		4		12				32		2		1,157		131	10	
San Sebastian:																	
Insular inspection	58		14		3		1		15		6		461		264	29	
Municipal inspection	90		2				1		15		1		767		117	138	
Total	148		16		3		1	1	30		7		1,228		381	147	
Santa Isabel:																	
Insular inspection									5				5				
Municipal inspection	71		7		9		1		18		2		518		111	82	
Total	71		7		9		1		23		2		523		111	82	

in each municipality by insular and municipal inspectors, respectively, according to reports—Continued.

Measures.				Miscellaneous.				Totals.				Packages.		
Linear.				Liquid.										
Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Heavy.	Correct.	Light.
143	188	1	11	37	76	8	5	596	1,662	318	58	56	174	53
		2					1			106	35	2	712	8
331		1	13	113		8	5	2,258	2	423	93	58	886	61
12	35			1	6			115	496	64	39	10	18	
											2		531	
47				7				611	80	108	2	10	539	
183				118		1	4	933	75	143	11	12	12	
												107	1,061	30
183				118		1	4	933	75	143	11	119	1,063	30
229	19			128	2	1	56	66	1,794	161	1	100	807	291
												930	2,724	132
229	19			128	2	1	56	1,960	161	781	50	1,080	3,531	423
29				15	7			398	181	263	256	65	246	
												812	11,164	471
29				22				579	263	256		877	11,410	471
19		1	6					94		21	34	3	63	13
112		3	41			3		647		207	40	236	436	19
131		4	47			3		741		228	74	229	496	32
34				28	2		2	746	5	320	5	43	140	
3				9				1,264				811	6,117	325
37				37	2		2	2,010	5	320	5	854	6,267	325
880	14	48	4,847	13	44	237	1	10,888	11	1,883	553	3,076	8,806	1,733
273	1	4	2,399	1	1	1,210		11,296		820	406	214	6,019	49
1,159	15	52	7,216	14	45	1,447	1	22,171	11	2,703	958	3,290	14,827	1,782
149		1	28		1			1,325		137	10	265	89	122
32			5					229			2	22	583	
181		1	33		1			1,554		137	12	287	672	122
73		6	15	1	5	42	1	667		287	40	41	208	10
85		7	1		3			958		120	149		1,292	
158		13	16	1	8	42	1	1,625		407	189	41	1,495	10
140								10					12	
				9		1	1	766		120	54	492	4,900	249
140				9		1	1	776		120	54	492	4,912	249

STATEMENT No. 8.—Bureau of weights and measures—Table showing work accomplished daily and fortnightly

	Scales.												Weights.			
	Counter.				Spring.				Platform.							
	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.
Toa Alta:																
Insular inspection.....	59		13		13		1	2	11	1	2		550	17	274	41
Municipal inspection.....																
Total.....	59		13		13		1	2	11	1	2		550	17	274	41
Toa Baja:																
Insular inspection.....	35		2	1	3				10	1	1		182	7	177	19
Municipal inspection.....	2				2				1				127			25
Total.....	37		2	1	5				11	1	1		309	7	177	44
Trujillo Alto:																
Insular inspection.....	25	1	8	2	5	1		3	4	1	3		228	1	112	31
Municipal inspection.....	1								1				15			
Total.....	26	1	8	2	5	1		3	5	1	3		243	1	112	31
Utusado:																
Insular inspection.....	95	4	2		7	1			31	1	12		756		304	16
Municipal inspection.....	145	12	16		18				47	11			1,793	16	303	10
Total.....	240	16	18		25	1			78	12	12		2,549	16	607	26
Vega Alta:																
Insular inspection.....	12		1	1					6	2	1		79		67	26
Municipal inspection.....																
Total.....	12		1	1					6	2	1		79		67	26
Vega Baja:																
Insular inspection.....	61	1	13	4	12	1	1	1	31	3	1		494	7	334	84
Municipal inspection.....	45			2	6				7	1			546	10	125	116
Total.....	106	1	13	6	18	1	1	1	38	4	1		1,040	17	459	200
Vieques:																
Insular inspection.....	84	3	13	6	14	1		13	48	2	5	2	788	4	212	152
Municipal inspection.....	2				1			1	1				32			6
Total.....	86	3	13	6	15	1		14	49	2	5	2	820	4	212	158
Villalba:																
Insular inspection.....	50		1	1	13				6		3		455		113	17
Municipal inspection.....																
Total.....	50		1	1	13				6		3		455		113	17
Yabucoa:																
Insular inspection.....									5				24			
Municipal inspection.....	86				7			1	23	1			420		336	30
Total.....	86				7			1	28	1			444		336	30
Yauco:																
Insular inspection.....	92		1	1	1				34	15	2		687		334	20
Municipal inspection.....	73		8		4		2	1	6				942		228	57
Total.....	165		9	1	5		2	1	40	15	2		1,629		562	77
Total packages re-weighed by insular police.....																
Grand total.....	8,955	100	783	125	2,926	30	282	126	3,029	147	508	29	90,812	1,576	25,151	5,399

in each municipality by insular and municipal inspectors, respectively, according to reports—Continued.

Measures.				Miscellaneous.				Totals.				Packages.						
Linear.		Liquid.																
Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Correct.	Corrected.	Condemned for repairs.	Condemned and confiscated.	Heavy.	Correct.	Light.				
140		9	43				1	816	18	290	62	50	82	38				
140		9	43				1	816	18	290	62	50	82	38				
96		3	17			3		343	8	180	26	34	44	19				
			4					136			25	29	239	22				
96		3	21			3		479	8	180	51	63	283	41				
73		10	10			4	1	346	4	124	50	2	110					
							1	17					26					
73		10	10			4	1	363	4	124	50	2	136					
186			59		1	3	4	1,138	6	322	19	288	361	32				
308		2	79					2,350	30	319	12	21	3,554					
454		2	138		1	3	4	3,488	45	641	31	309	3,915	32				
16		1	6			1		119	2	60	29	11	28	11				
												65	2,392	70				
16		1	6			1		119	2	69	29	76	2,420	81				
72		20	31			6		701	12	349	116	129	338	125				
2			8				1	614	11	125	118	611	4,542	143				
74		20	30			6		1,315	23	474	234	740	4,880	267				
194	3	30	44		1	17	24	1,196	14	233	221	43	412	50				
			2		1	8		89		1	15	2,062	4,587	607				
194	3	30	47		2	25	24	1,235	14	234	236	2,096	4,999	657				
120			6					660		117	18	35	46	120				
120			6					660		117	18	35	46	120				
69		7	59			4		29				59	18	64				
								664	1	336	42	664	3,455	141				
69		7	59			4		693	1	336	42	753	3,473	205				
32			33		2			880	15	339	21	35	112	10				
286			10					1,328		238	58	2,530	12,306	834				
326			43		2			2,206	15	577	79	2,365	12,478	844				
												785	9,366	694				
17,383	22	83	555	13,594	4	78	591	3,368	8	30	75	140,017	1,887	26,920	6,900	88,677	317,044	28,196

STATEMENT NO. 9.—*Bureau of supplies, printing, and transportation—Balance sheet, June 30, 1919.*

ASSETS.		LIABILITIES.	
Property.....	\$68,961.50	Investment.....	\$124,322.37
Printing division.....	353,379.86	Appropriation.....	25,000.00
Transportation division.....	11,743.91	Collections refundable.....	281.85
Furniture and fixtures.....	4,139.63	Accounts payable.....	33,951.36
Equipment.....	707.11	United States invoices.....	333,951.96
		Local invoices.....	0.00
Funds.....	798.46	Audited vouchers and pay rolls, controlling account.....	29,329.00
Treasure of Porto Rico.....	798.46	Suspense, accounts payable.....	292.15
Merchandise (inventory).....	51,112.18	Reserve for purchases and renewals.....	11,149.36
Material and supplies.....	42,798.54	Printing division.....	87,058.36
Transportation division.....		Transportation division.....	2,089.90
supplies.....	1,091.59		
Purchases in transit.....	7,238.05	Adjustment account.....	62.29
Accounts receivable, controlling accounts.....	87,921.77		
Suspense, accounts receivable.....	5,532.44		
Work in progress, controlling account.....	8,427.77		
Revised statutes and codes of Porto Rico.....	299.00		
Goods returned or lost.....	199.19		
Unearned insurance premium.....	542.06		
Printing division expense in suspense.....	55.69		
Building.....	1,858.76		
Post-office department (deposit for letter-box keys).....	.60		
Total.....	225,444.42	Total.....	225,444.42

STATEMENT NO. 10.—*Bureau of supplies, printing, and transportation—Statement for fiscal year 1918-19.*

PURCHASES AND SALES.

ASSETS.	
Inventory, June 30, 1918.....	\$50,222.37
Materials and supplies.....	334,968.14
Transportation division supplies.....	3,106.53
Purchases in transit.....	12,316.96
Revised Statutes and Codes of Porto Rico.....	299.00
Work in progress.....	8,562.74
PURCHASES, SALES ACCOUNT.	
United States.....	255,926.75
Freight, crating, and insurance.....	20,861.63
Local.....	852,147.00
Freight, crating, and insurance.....	9,979.39
Auto hire.....	862,126.30
	2,008.50
Total purchases.....	1,140,963.47
	1,200,161.94
Deduct inventory June 30, 1919.....	59,538.96
Materials and supplies.....	42,798.54
Transportation division supplies.....	1,090.69
Purchases in transit.....	7,238.05
Revised statutes and codes of Porto Rico.....	299.00
Work in progress.....	8,427.77
	1,140,322.99
Printing division, output.....	68,560.19
Less cost of stock.....	31,932.46
Transportation division earning.....	26,027.73
Delivery service earnings.....	19,353.81
Labor not distributed.....	1,422.06
Per diems not distributed.....	326.32
Government property sold.....	7.30
Bureau property sold.....	483.50
Additions to reserve for purchases and renewals:	692.00
Printing division—	
Total net credits for the year.....	3,156.50
Transportation division—	
Total credits for year.....	3,738.73
Less renewals.....	1,419.54
	2,319.19
	5,478.78

Adjustment account.....		\$62.29
Surplus from inventory (transportation division).....	\$24.44	
United States discounts billed, etc.....	37.85	
		<u>1,204,478.00</u>

LIABILITIES.

Total sales for the year.....	1,191,136.22	
Less corrections and deductions.....	2,771.54	
Net sales for the year.....		1,188,364.68
Supplies used by divisions as under.....		11,046.13
Transportation division.....	11,778.94	
Printing division, administration.....	1,959.39	
Bureau office, paid from contingent expenses.....	1,812.32	
Delivery service.....	474.38	
Claims:		
Additions to goods returned or lost.....		97.19
Balance June 30, 1919.....	139.19	
Balance June 30, 1918.....	42.60	
		<u>1,204,478.00</u>

STATEMENT No. 11.—Bureau of supplies, printing, and transportation—Printing division, fiscal year 1918-19.

COSTS.

Material used on jobs:		
Pressroom.....	\$30,497.41	
Bindery.....	1,435.05	\$31,932.46
Wages:		
Composing room.....	19,128.07	
Pressroom.....	4,900.71	
Bindery.....	8,742.09	32,770.87
Power and light:		
Composing room.....	485.66	
Pressroom.....	523.24	
Bindery.....	90.86	1,099.76
Fuel gas:		
Bindery.....	57.98	
Pressroom.....	.26	58.24
Gasoline:		
Composing room.....	854.47	
Pressroom.....	209.03	1,063.50
Oil, waste, and grease:		
Composing room.....	13.00	
Pressroom.....	36.10	49.10
Water:		
Composing.....	46.90	
Pressroom.....	37.32	
Bindery.....	28.10	112.32
Proof paper, jackets, and stationery for administrative division:		
Composing room.....	200.48	
Pressroom.....	244.38	
Bindery.....	214.56	659.42
Insurance on machinery and tools:		
Composing room.....	106.88	
Pressroom.....	71.06	
Bindery.....	35.80	213.74
Repairs and maintenance:		
Composing room.....	52.81	
Pressroom.....	348.92	
Bindery.....	63.05	464.78
Towel service.....		64.00
Telephone service.....		72.00
Total.....		68,560.19

OUTPUT.

Composing room.....	\$48,145.04
Pressroom.....	9,707.36
Bindery.....	10,707.79

Total..... 68,560.19

STATEMENT No. 12.—*Bureau of supplies, printing, and transportation—Transportation division, fiscal year 1918-19.*

AUTO SERVICE.

COSTS.	
Wages.....	\$5,392.45
Gasoline.....	4,608.53
Oil, waste, and grease.....	429.27
Materials for repairs.....	1,399.87
Material for equipment.....	5,405.56
Chauffeurs, per diem.....	1,551.25
Water.....	237.09
Power and light.....	7.20
Insurance on cars.....	90.27
Office stationary and supplies.....	114.08
Telephone service.....	74.96
Expressage and hauling, etc.....	43.18
	<hr/>
Added for purchases and renewals.....	19,263.81
Labor on department cars.....	3,738.73
Automobiles hired.....	2,003.50
Total.....	<hr/> 25,422.94 <hr/>

DELIVERY SERVICE.

Insurance.....	20.00
Wages.....	958.30
Gasoline.....	337.18
Oil, waste, and grease.....	42.19
Repairs, maintenance, and equipment...	45.08
Total.....	<hr/> 1,452.65 <hr/>

EARNINGS.

144,391 kilometers.....	\$25,194.91
Labor on department cars, billed.....	318.58

Total.....	<hr/> 25,422.94 <hr/>
------------	-----------------------

Amount of charges distributed.....	1,452.65
------------------------------------	----------

Total.....	<hr/> 1,452.65 <hr/>
------------	----------------------

APPENDIX III.

REPORT OF THE COMMISSIONER OF HEALTH.

SAN JUAN, P. R., August 10, 1919.

HON. ARTHUR YAGER,
Governor of Porto Rico, San Juan, P. R.

SIR: Pursuant to your letter of July 7, 1919, indicating the form and essential parts to which the annual report of each department should conform as an integral part of the report which you will submit to the Secretary of War, and bearing in mind the desire to commemorate the twentieth anniversary of the establishment in Porto Rico of the American Government upon the ratification of the Treaty of Paris on April 11, 1899, the present report will be the expression of a comparative analysis of the sanitary conditions of the island during the Spanish régime with those prevailing since that date under American administration, as well as a clear and concise synthesis of the evolution accomplished, and therefore of the progress which hygiene and sanitation have made in Porto Rico.

Aside from said fundamental recommendations which are fully carried out, this report must indispensably contain recital, although general and summary, of other interesting proceedings highly revealing the unquestionable progress made by hygiene and sanitation in Porto Rico.

The fiscal year just ended has been one of trial, of hard and difficult trial, for this department: but through the supremacy of the effort made the department may feel satisfied with the success attained and with the fulfillment of its duty.

In this respect it is sufficient to state in chronological order:

(1) The memorable catastrophe caused by the earthquakes which so violently and tragically commenced on October 11, 1918, especially in western and southern sections of the island, and whose mechanical action made debris out of such flourishing towns as Mayaguez, Añasco, Aguada, and Aguadilla, causing the loss of 116 lives (shown in and increasing the mortality tables), which were few lives compared with the immensity of the catastrophe. This was undoubtedly due to the hour at which the shocks commenced, 10 a. m. The department rendered prompt and timely aid to the wounded (241), as did also the American Red Cross Chapter and the Camp Las Casas military authorities.

The number of seismic shocks reflected upon and deeply affected the physical and psychological condition of many healthy organisms. This effect was still greater on the organically predisposed (persons suffering from affections of the heart) and on those neuropathically handicapped.

(2) The influenza pandemic, the history of which in Porto Rico deserves a special chapter elsewhere in this report, was combated with unquestionable success and in a relatively short period of time, if comparison is made with the long duration and secondary outbreaks in other countries having great resources and considered better prepared than ours from a sanitary point of view.

(3) The department of health, with its organization in harmony with the progress of modern sanitary science, has met other crises, such as the outbreaks of typhoid fever and of diphtheria in San Juan, as well as the numerous cases of lobal pneumonia, the parotiditis epidemic, and the cases of cerebrospinal meningitis, an epidemic which was no doubt imported by the Porto Rican laborers returning from factories where they worked in the United States and from soldiers in the cantonments.

(4) The other sanitary problems, that is, the diseases of vital importance in Porto Rico, owing to their derivation from human foci, and which are uncinariasis, malaria, and tuberculosis, as well as infantile mortality, constitute the basic thought of the progressive development of the sanitary plan conceived by the undersigned from the moment that he assumed charge of the direction of this department as commissioner.

And before closing it is pertinent to state that at present the Territory of Porto Rico may be considered within the limits of a satisfactory sanitary normality.

Respectfully,

A. RUIZ SOLER,
Commissioner of Health.

COMPARATIVE REPORT ON THE SANITARY ORGANIZATION OF PORTO RICO DURING SPANISH AND AMERICAN SOVEREIGNTY.

The hygiene of transmissible diseases, considered as one of the most important branches of modern medicine, was but little mentioned during the days of the Spanish régime, because sanitary methods were then unknown notwithstanding the existence of a careful and fruitful codification of laws, decrees, and municipal ordinances, which were never complied with. Had such been the case, they would have made Porto Rico a model of salubrity, for with its beautiful nature and medical topography it is one of the most healthful countries in the Torrid Zone. In addition we must consider the fact that its territory is an uninterrupted series of mountains and valleys cut by river and brooks or streams, and that it is surrounded by beaches and cooled by copious rains during most of the months of the year, which rains carry off all telluric and atmospheric impurities.

Said laws and ordinances were practically dead letter. There existed a superior board of health, composed of a personnel of high official rank, but unskilled and absolutely ignorant of modern conceptions of sanitation, and whose decisions could be and frequently were annulled by the absolute authority of the captains general, who had the double personality of civil governors of the colony.

There also existed local health boards with much more limited powers, whose decisions were subject to previous approval by the central authority. In addition to those boards of health there existed two other organizations: One, the subdelegation of medicine which was created in the year 1768, with the prerogatives of a bureau of hygiene and sanitation. The duties of this subdelegation always chiefly consisted in the supervision of examinations; ratification of foreign degrees; the issuance of professional licenses to graduates of Spanish universities or of the University of Cuba; to serve as arbiter in controversies between physicians and patients, and in reporting on such medicolegal matters as might be submitted to it by the court of justice. The other organization was the subdelegation of pharmacy, which had unusual powers over the pharmacists of the island, and could impose heavy fines upon violators of the law.

All of these bodies were abolished by the American military government and their powers and duties were conferred on a new superior board of health, by general order No. 91 of June 29, 1899. This board was composed of six members, military and civil, with instructions to prepare regulations governing its work. Said order directed that the management and control of the insane asylum at San Juan, which was in charge of the public educational authorities, be transferred to the board of health of Porto Rico, and by general order No. 102 of July 18, 1899, the functions of said board in all matters directly affecting public health were defined.

This board, upon the establishment of civil government on May 1, 1900, passed to the department of the interior as a bureau or subdivision thereof, and in the year 1902 an act was approved by the legislative assembly providing for the appointment of a director of health, the appointee having been a Porto Rican physician of recognized competence, as were also his successors. Said law defined the duties of the director of health, and constituted a superior board of health, whose work shows real sanitary progress, as may be seen in the proper annual reports.

By virtue of another law approved May 1, 1904, the department of health; charities, and correction, also called the consolidated department, was established. Its work was very meritorious and worthy of the greatest praise, as is proved by the mortality statistics for that period.

Successive directors of health in said department were Porto Rican physicians prominent in medical science.

The governor, on recommendation of the director and with approval of the executive council (Foraker Act), appointed a superior board of health, composed of five members, which acted as an advisory body to the director of health, charities, and correction in all matters concerning sanitary investigations, locating causes of diseases, specially epidemic diseases, causes of mortality, register of births, marriages, deaths, etc.

By act of March 12, 1903, the governor, with the consent of the executive council (now the senate), appoints "five learned, skilled, and capable physicians," who shall have been residents of the island for not less than five years preceding their appointment, to hold office for five years, and to constitute the board of medical examiners, which has power to grant certificates enabling certain persons, upon examination, to practice medicine and surgery or any of the branches thereof—obstetrics, optometry, osteopathy, etc. The board may refuse to grant such certificates and may revoke them when there exists a legitimate cause for such action according to law.

Unessential amendments have been made to said law by subsequent acts.

The board of dental examiners was created by act of March 9, 1905. It is composed of "three skilled dentists of good repute," who hold office for three years. Said board has power to grant to certain persons, after complying with certain requirements, such an examination in some cases, certificates to practice dental surgery in Porto Rico, or to refuse the issuance of such certificates or to cancel the same should there be a just cause therefor.

The board of pharmacy was created by act of March 8, 1906. The governor, with the advice of the executive council, designates "five skilled pharmacists of good repute, residing in the island of Porto Rico." No person can be appointed to serve on said board who has not practiced said profession for a term of four years prior to his appointment. The members of said board hold office for four years.

In accordance with law, the governor may remove any member for incompetence, manifest moral turpitude, abuse of power, or for any other justified cause.

Said board elects one of its members as president, another as secretary, and another as treasurer, and meets at least twice a year. The board keeps a minute book and a register.

The board has power to grant certificates to enable certain persons to practice the profession of pharmacy in Porto Rico, after complying with certain requirements, such as examination, in some cases. It may refuse to grant such certificates or may cancel same provided there is a justified cause therefor according to law.

There also exists another board, the board of veterinary examiners, created by act of April 13, 1916, which board is authorized to grant certificates and to perform work similar to that of the other boards.

Finally, on March 9, 1911, an act was approved "To provide Porto Rico with a law on sanitation," which was amended by another, the one at present in force, entitled "An act to reorganize the sanitation service," approved March 14, 1912.

This law constitutes the perfect integration of the sanitary organization of Porto Rico, as complete and perfect as the same organization in any of the States of the Union, some of our bureaus having been established before similar bureaus in some of the States.

The Jones Act, that is, the organic act, approved by Congress on March 2, 1917, "To provide a civil government for Porto Rico, and for other purposes," section 19, provides that the commissioner of health (designation substituting that of director of sanitation) shall have charge of all matters relating to public health, sanitation, and charities, except such as relate to the maritime quarantine service, and shall perform such other duties as may be prescribed by law.

The department of health of Porto Rico is composed of the following bureaus and divisions:

Office of the commissioner, with one assistant commissioner and the necessary subordinate personnel. The blind asylum, boys' and girls' charity schools, and the insane asylum are under its immediate supervision.

The insular board of health is composed of seven members, doctors in medicine and surgery, one pharmacist, one lawyer, one sanitary engineer, one secretary, and subordinate employees.

A division of property and accounts, a division of sanitary engineering, composed of three engineers, a draftsman, two plumbing inspectors, and clerks.

The chemical laboratory, with a chemical director, assistant chemists, and three food and drug inspectors.

The bacteriological laboratory, with one medical director, one assistant director, also a physician, and assistants.

The division of transmissible diseases and statistics, with one division chief, one medical pathologist, one assistant chief of division, two veterinarians, and clerks. To this division pertains the quarantine hospital, the antituberculosis sanatorium, and the leper colony.

The field force is composed of two medical inspectors, nine medical health officers, and ninety sanitary local inspectors, with the necessary office personnel.

Such is in synthesis of the sanitary organization of Porto Rico, which has achieved unquestionable progress in the fundamental ends sought by such organizations.

REPORT OF THE INSULAR BOARD OF HEALTH.

SAN JUAN, P. R., August 6, 1919.

HON. ARTHUR YAGER.

Governor of Porto Rico, San Juan, P. R.

SIR: I have the honor to submit the annual report of the insular board of health for the fiscal year 1918-19, during which year, on April 20, the anniversary of the American occupation of Porto Rico took place.

The modern sanitary organization of our island began on June 29, 1899, the date on which the American military government established the board of health.

The success of the general vaccination, under direction of the then chief of military sanitation, Col. John Van R. Hoff, surgeon, United States Army, exterminated for many years the epidemics of smallpox that frequently invaded the island, and was one of the most encouraging experiences justifying the desirability of giving our island an effective sanitary organization, thus satisfying the needs of a civilized people. A detailed and complete study of the sanitary laws then existing was made. From this examination it was seen that the sanitary laws in relation to the foreign countries were satisfactory, although on several occasions they were not vigorously enforced, thus permitting the spread of some imported diseases, among them yellow fever and smallpox. The interior sanitary regulations in regard to emergency cases (epidemics) were not very efficient in the suppression of the causes disturbing public health.

Since the end of the American military government all the organizations that have directed the work of public health in Porto Rico, some of which have depended directly on the governor, others on the department of the interior, and others on that of health, charities, and correction, have adhered to almost the same program: First, sanitary legislation; second, a technical personnel of recognized ability; third, an adequate budget to cover the cost of a good sanitary administration.

The law providing a service of sanitation for Porto Rico, approved March 9, 1911, conferred on the insular board of health executive power that experience proved to be the cause of difficulties with the department of sanitation, for which reason it was amended by act No. 81, "To reorganize the sanitation service," approved March 14, 1912, and now in force, which confers on the insular board of health legislative and advisory powers in all matters affecting public health. This law has been put in practice satisfactorily, as is proved by the work in the prevention and control of the several epidemics that in these last years have visited the city of San Juan and some other towns of the island and in the evident sanitary progress that can be observed.

The opinion has always prevailed in the board that sanitation is something more than momentary defense against any epidemic disease; that above all it should be preventive in character and maintain a constant struggle for the improvement of individual and collective resistance to epidemic and the suppression of endemic diseases. Public opinion has not always been unanimous in accepting certain sanitary measures. However, owing to the new sanitary education of the people they are beginning to recognize the efficiency of health regulations in the betterment of certain services, such as sanitary dwellings, the free circulation of drainage waters, contagious diseases, and others. The island is rapidly acquiring a knowledge of its sanitary duties and of the advantages derived from their observance.

A liberal budget is indispensable for the continuation of intense sanitation such as is demanded by the times in which we live.

The board of health insists, among its future purposes, in the recommendation that it has made in regard to the water supply in former reports and in the study of regulations for the maintenance of aqueducts. The board maintains the fixed idea that all the known causes that lead to human degeneration should be fought against, applying this knowledge to the prevention among the inhabitants of this island of the consequences of avoidable infections, especially those of a sexual order. It is also studying the infantile population and the means of avoiding excessive infant mortality.

This outline of program will be developed according to the necessities of the island and the means at hand.

The insular board of health is composed at present of the following members: Dr. F. del Valle Atilas, president; Dr. Gustavo Muñoz Diaz, Dr. Jose S. Belaval, Dr. Rafael Bernabe, physicians; Mr. F. W. Dalrymple, sanitary engineer; Mr. J. Hernandez Lopez, attorney; Mr. Jose J. Monclova, pharmacist; and Dr. Jose Lugo-Viña, secretary. Office of the board, clerk and stenographer, Mr. Juan Morales Diaz.

For the due consideration of the subjects that have come before the board regular sessions have been held, and such extraordinary sessions as were deemed indispensable to act upon the different subjects that come up for consideration, some of them of singular importance due to the abnormal circumstances of the times. The details of these deliberations can be seen in the minutes.

The board, after observation, has deemed necessary some amendments to the regulations in force, which were submitted at the time for the approval of the executive council. The board has also made two new regulations: "For the prevention of infantile mortality from tetanus and blindness caused by ophthalmia neonatorum," and regulations No. 61 for the registration of patent medicines, as a substitute for regulations No. 45 on the same subject, which was suspended.

Amendments to regulations.—Articles 25 and 27 of regulations No. 14, houses, edifices, and constructions within towns; article 11 of regulations No. 11, on the removal and burial of bodies; article 9 of sanitary regulations No. 9, plumbing, sewers, and installation of gas.

Regulations under consideration.—(1) For the prevention of the propagation of venereo-syphilitic diseases; (2) for the regulation of the making of sausages and other cooked foods; (3) the medical inspection of school children.

EXTRA-CANTONMENT ZONE, CAMP LAS CASAS.

On September 17, 1918, the commissioner of health came before the board and submitted for consideration a report of Dr. W. W. King, of the United States Public Health Service, in which he recommended that formation of a special provisional district, comprising all the area surrounding Camp Las Casas, and at the same time offered the financial cooperation of the Federal Government and of the Red Cross for the sanitary work that should be done in said special district.

The board of health, considering the report of Dr. W. W. King worthy of study and examination, held sessions on the 17th and 23d of said month. They had before them besides the document addressed by said officer of the United States Public Health Service to the Surgeon General of the same service, a letter from the governor of Porto Rico, dated September 16; a letter from the commissioner of health, of the 17th of the same month; and circular No. 7 of the department of health, comprising the sanitary organization of the sanitary zones of San Juan, Puerta de Tierra, Cataño, and Río Piedras.

The board of health issued a report on the 24th of September recommending, in synthesis to the commissioner of health, that he accept said cooperation, and that he might proceed on his legal authority to the temporary appointment of a special sanitary official for said zone.

EPIDEMIC OF INFLUENZA.

On the 5th of November, 1918, the commissioner of health notified the insular board of health that the number of cases of influenza was increasing in the island; that he had taken the most urgent measures to combat the spread of the disease, and that he was endeavoring to hospitalize the greatest possible number of patients.

These reports were of such importance that the board agreed to hold a session on November 8, specially inviting the commissioner of health to attend. At this session the commissioner of health reported that there were 24 towns invaded by influenza, with an approximate number of from 4,000 to 4,500 cases; he announced to the board that the department of health could not act with the energy required by circumstances, because the funds at his disposal for the suppression of epidemics were almost exhausted, and that he could not expect much help from the municipalities attacked by influenza because they also had no funds.

The board of health, considering that influenza had spread to different localities, and that this disease distinguished itself for the facility and rapidity of its propagation, for which reason the case constituted a grave peril to public health in all places where the infection appeared, resolved, in accordance with section 5 of the law of sanitation in force, to consider the abnormal state of affairs existing as a menace to the health of the people, and, in consequence, advised the commissioner of health promptly to declare, with the approval of the governor, that an epidemic existed in order to take the measures best required by circumstances.

As soon as the department of health was provided with adequate funds for the hospitalization of the greatest number of patients possible in the towns where the epidemic showed the greatest spread, it was able to control and later to extinguish it, with the exception of a reappearance of a case now and then, as often happens.

SANATORIUM FOR THE TUBERCULOUS AND ISOLATION HOSPITAL.

In August of last year the department of health opened an active campaign against the white plague and drew up several circulars tending to this end. The board of health, unable to do otherwise, warmly accepted the invitation of the commissioner of health to join its forces with those of the department of health for this struggle for social defense. The campaign once started, this board cooperated with all due enthusiasm to obtain a brilliant result in favor of the tuberculous poor.

Received to date.....	\$12,838.20
Paid for materials and wages for the construction of five private cottages.....	8,529.38
Outstanding accounts.....	1,588.22
Accounts under consideration.....	155.80
Accounts before the board.....	17.90
Total paid out.....	10,271.30
Balance.....	2,531.90

Mr. F. W. Dalrymple acts as treasurer. He was appointed by the board and has given bond for the sum of \$5,000.

CONSTRUCTION.

There are under construction besides the 11 cottages paid for from the funds of the people of Porto Rico, 8 more that are being built with money given by the following persons: Dr. Santiago Veve Calzada, Hon. Eduardo Giorgetti, Hon. Jorge Bird Arias, Hon. Arturo Lluberas, Hon. Jose J. Benitez, Hon. Federico Calaf (2 cottages), and The Fajardo Sugar Co.

Again this board, on the receipt of a letter from the governor asking for suggestions, at its session of January 20, 1919, resolved to recommend that in his message to the legislature he should present the necessity of increasing the epidemic fund and the funds appropriated to combat tuberculosis, hookworm, and malaria, and also to recommend the establishment of general district hospitals, as it is evident that hospital treatment for the poor is the most efficient and beneficial, on account of the conditions in which the greater part of the working classes live, especially the country people, whose dwellings are scattered about and are far from centers of population.

SANITARY CODE.

On November 19, 1917, the legislature of Porto Rico approved law No. 19 authorizing and directing the insular board of health to edit a sanitary code, etc. This board has revised the sanitary regulations now in force, with the object of preparing the code, thus complying with the order of the legislature. In the formation of this code the board of health has realized the natural difficulties of the matter, on account of the characteristics of the sanitary regulations and of other circumstances in regard to the uniformity of precepts, in relation with the special conditions of each locality to which such regulations must be applied, for these reasons some repetitions in the code are inevitable when endeavoring to classify the precepts of our sanitary legislation.

The Code of Sanitation that this board sent to the legislature in compliance with act No. 19, comprises:

- Book 1.—Food, prevention of impurities and contamination of foods and drinks.
- Book 2.—The sick and diseases.
- Book 3.—Pharmacy and drugs.
- Book 4.—Habitation. Air and construction of buildings.
- Book 5.—Soils and disposition of bodies.
- Book 6.—Plumbing, sewers, and the installation of gas.

Respectfully,

F. DEL VALLE ATILES, *Chairman.*
JOSE LUGO-VIÑA, M. D., *Secretary.*

MORTALITY.

A scientific and well based sanitary organization must direct its utmost efforts to the accomplishment of the three fundamental objectives which integrate social hygiene-dynamics; that is, to decrease mortality, increase natality, and to obtain greatest longevity within the limits fixed by nature on human existence, a trilogy, which resting on nuptiality and on sound fecundity, constitutes the characteristics of modern sanitary science.

Of these elements, all worthy of study, mortality is the nucleus given origin to all sanitary work resolving the important problem of preventing the diseases determining it, or in other words, morbidity.

And for this reason civilized nations and enlightened countries delegate to sanitary authorities their governmental powers to avoid disease and to retard death as much as possible and in harmony with available funds which are almost always in limited amounts.

These conceptions lead to the corollary of relative values in the fight for public health; and, in sound logic for the determination of these values, it is necessary to make use of both morbidity and mortality statistics.

Now, then, to be able to form a critical judgment in regard to mortality in Porto Rico, the statistics for the last few years of the old régime must be compared with those for the past two decades of the present American administration, which statistics follow:

Year.	Estimated population.	Deaths.	Rate per thousand.	Year.	Estimated population.	Deaths.	Rate per thousand.
			<i>Per cent.</i>				<i>Per cent.</i>
1898.....	811,454	25,568	31.5	1894.....	888,793	24,896	28.0
1897.....	824,344	26,255	31.8	1895.....	901,683	26,284	29.1
1896.....	837,234	26,955	32.1	1896.....	914,573	25,435	27.8
1891.....	850,124	24,083	28.3	1897.....	927,463	31,980	34.4
1892.....	843,014	24,474	28.3	1898.....	940,353	33,614	35.7
1893.....	875,903	21,616	24.6				

The foregoing figures show that about 3 per cent of the population of Porto Rico died each year, at the rate of 30.2 per thousand.

From the year 1899 statistics continue as follows:

Year.	Estimated population.	Deaths.	Rate per thousand.	Year.	Estimated population.	Deaths.	Rate per thousand.
			<i>Per cent.</i>				<i>Per cent.</i>
1898-99.....	983,243	39,918	41.89	1904-5.....	1,043,117	23,700	22.72
1899-1900.....	968,222	44,023	45.47	1905-6.....	1,058,066	21,100	19.95
1900-1901.....	963,201	37,800	36.41	1906-7.....	1,073,075	27,125	25.28
1901-2.....	998,180	24,500	24.54	1907-8.....	1,088,054	23,500	21.59
1902-3.....	1,013,159	25,553	25.22	1908-9.....	1,103,033	22,000	19.94
1903-4.....	1,028,138	23,100	22.46				

The average number of deaths during the 11 years included from 1898 to 1909 was 28,210; that is, 27.27 per thousand; and from 1909 until about the middle of the present year of 1919 statistics are as follows:

Year.	Estimated population.	Deaths.	Rate per thousand.	Year.	Estimated population.	Deaths.	Rate per thousand.
			<i>Per cent.</i>				<i>Per cent.</i>
1909-10.....	1,118,012	24,800	22.18	1914-15.....	1,196,322	23,664	19.78
1910-11.....	1,133,674	26,579	23.45	1915-16.....	1,211,894	26,572	21.92
1911-12.....	1,148,333	28,704	24.97	1916-17.....	1,227,646	34,939	28.45
1912-13.....	1,164,998	26,034	22.35	1917-18.....	1,234,840	34,457	27.71
1913-14.....	1,180,660	21,775	18.44	1918-19.....	1,258,970	39,974	31.75

¹ In showing the number of deaths for the year 1918-19, the deaths caused by influenza were included in the above table. Had they not been included, said period of time having been considered as one of sanitary normality, the number of deaths would have been 29,086 instead of 39,974 and the rate per thousand 24.10 instead of 31.75.

The average number of deaths for the decade ending in June of the present year was 28,750; that is, 24.095 per thousand.

So much for figures. Now, there is room for questions. Which are the prevalent diseases in Porto Rico? Are they preventable? To what extent is the responsibility of the department of health involved? What percentage of the total mortality of the island could be reduced?

Statistics show that in the fiscal year 1918-19, in an estimated population of 1,258,970 inhabitants, infant mortality under one year, from 1 to 2, and from 2 to 5 years, reached the enormous figure of 15,575, including 3,350 deaths from influenza and its chief complications, after deducting which there remain 12,165 deaths, or 9.66 per thousand of population.

The number of deaths from tuberculosis was 2,764; that is, 2.10 per thousand of population.

The number of deaths from malaria was 1,576, or 1.25 per thousand of population.

That from uncinariasis, 1,059, or 0.84 per thousand of population.

As to infant mortality, an analysis of the prenatal causes and causes would necessarily lead us to the means for removing them to prevent the large number of stillbirths, which this fiscal year reached 4,063, a discouraging figure, which is nothing but the fatidical exponent of the little or no attention given in Porto Rico to hygiene in pregnancy; to the diseases of the father and of the pregnant woman, specially to gravid

intoxication; to the various dystorcias, wholly preventable; to tuberculosis, syphilis, etc. Many infants overcome such tares, but are born to life with the stigma and characteristics of congenital debility, and condemned to a premature death.

Others die shortly after birth through lack of acespsis and antisepsis in the cutting and cure of the umbilical cord. In Porto Rico there have been 601 deaths recorded caused by infantile tetanus, a figure which induced the insular board of health to draft regulations under the title 'Regulations to prevent infantile mortality from tetanus and of blindness due to ophthalmia neonatorum.'

The commissioner of health asked of the legislature for an appropriation of \$5,000 for such preventive purposes, but his request was not approved.

And last comes enteritis, the fatal consequences of which and the means of preventing it have been discussed in the chapter on infantile mortality, which can and should be reduced to a minimum, in harmony with postulates governing biology and modern sanitary science. Not more than 8,000 children under 5 years should die annually in Porto Rico.

Deaths from tuberculosis must necessarily decrease as soon as the department successfully completes the sanatorium and the hospital for tuberculous patients, and has the cooperation of dispensaries and visiting nurses.

The same will happen with malaria and uncinariasis through hospitalization, the practical importance of which is incontrovertible. To insist upon its demonstration would be redundant.

INFANTILE MORTALITY.

A great majority of modern sociologists maintain that the health and biological aptitude of a people are even more essential to the stability of a country than scientific, political, and economic progress.

The military recruiting in Porto Rico under compulsory service was a source of surprise to physicians because of the number of unfit youths suffering from physical and mental defects.

The records of Camp Las Casas, notwithstanding the selection, showed a high contingent of uncinariasis. Four months after training commenced improvement in health, vitality, and physical efficiency was extraordinary.

Now then, if such phenomena follow an indeclinable biological determination, why not provide an infantile hygiene, accompanied by proper sanitary education, so that the children of Porto Rico will not die, and those who live will become good and sound elements of our collective life?

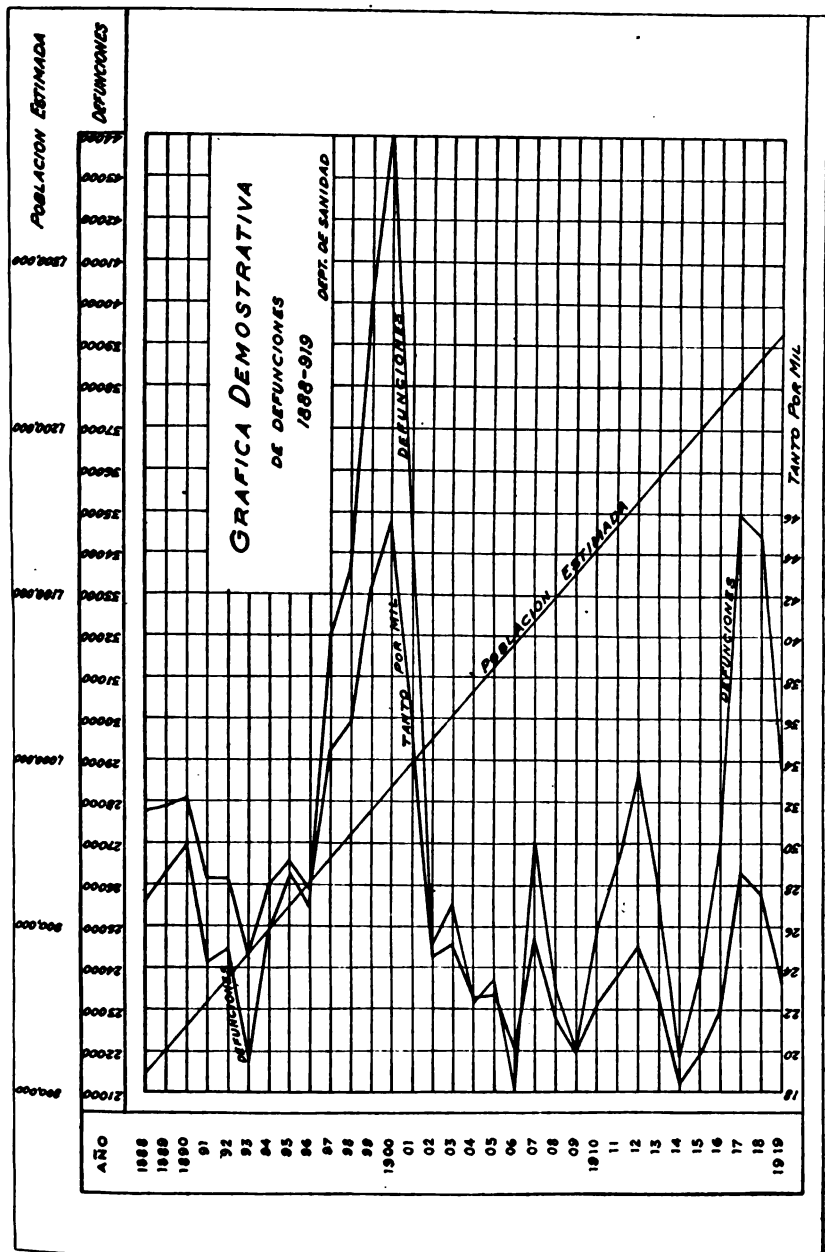
It is an unavoidable fact that the high figure of infantile mortality in this island is the immediate and direct consequence of the absolute lack of such hygiene. It is undeniable that in the current fiscal year an important decrease in said mortality is noticeable, but this fact should not be considered a success. It is not more than a step in advance on the long road leading to the reduction of said mortality among children from 0 to 1, 1 to 2, and 2 to 5 years, and to the biological limits demanded by sociotechnique and the dynamics of social hygiene.

Among the factors responsible for the aforesaid statistical abnormality, milk holds a prominent position, because the milk consumed in the island is dear and scarce in proportion to the number of inhabitants, and it is not hygienic because of the bacteriologic impurities contaminating it, notwithstanding compliance, as far as possible, with the provisions of sanitary regulations No. 29.

For which reason, without foregoing sanitary requirements or deducting potentiality from the regulations in force, an incessant educational campaign is absolutely necessary. This is a most important step in obtaining the desired result; that is, the reduction of infant mortality. The fact has thus been understood by the Chief of the Bureau of Milk Industry of the Department of Agriculture, Washington, when he says: "The officers in charge of the inspection and surveillance of milk should first be educators and policemen when they find that the milkman does not wish to live up to the standard of legal precepts and conscience."

To reach such desideratum the department of health is preparing for free distribution among persons dealing in or handling milk, cards written in simple language, within the grasp of all minds, containing all the advice and expressing the procedure for securing hygienic milk, at the same time showing the danger to the lives of children when the healthy teachings therein expressed are not observed.

On the other hand, if it is considered that the problem of the scarcity of fresh cow's milk in Porto Rico is the direct and immediate consequence of the minimum production of native cows, which do not pay for their support, the best of them hardly yielding 3 liters a day, it will be readily seen that the solution is either to import the recognized acclimatable species classified as milk producers, such as the Jerseys and Ayrshires from England and the Holsteins from Holland, or to have recourse to the crossing of



breeds, which has given surprising results in the island, production having been increased at least three times as much as the regular production of the native cow.

Moreover, it is necessary to observe extreme care with cows in order to keep them sound under all aspects and to have them preserve the morphology characteristic of health, it being necessary to endeavor to free them from ticks, for which purpose the legislature, in the appropriations for the department of agriculture and labor, included \$15,000 for the construction of dipping tanks and for the purchase of drugs adequate for the extinction of ticks.

Besides, Porto Rican children of the poorer classes prematurely substitute artificial for maternal lactancy, by virtue of a lamentable and disastrous precocious weaning for inadequate foods which are improper and by all means inconsistent with the period of anato-mo-physiologic evolution of the digestive system of the child. Such food consists of bread, not always well made, rice, tubercules, greases, etc., as responsible as milk, and considered as veritable attempts against the wise laws of life.

Identical biological blunders are committed during the different periods of development up to the age of 5 years, which are sufficient to make evident the causes giving rise to such high figures of mortality during the first five years of life.

To these errors of nutrition must be added all prenatal causes and tares, accidents due to carelessness, such as infantile tetanus, ophthalmia neonatorum, and other diseases, which will be analyzed in this report in the chapter dealing with infantile mortality.

General mortality during the fiscal year 1918-19 as compared with 1917-18.

Month.	1917-18	1918-19	Month.	1917-18	1918-19
July.....	4,081	3,241	February.....	2,483	2,958
August.....	3,648	2,983	March.....	2,682	2,576
September.....	2,977	2,179	April.....	2,399	2,192
October.....	3,272	2,923	May.....	2,424	2,153
November.....	2,884	5,750	June.....	1,679	1,099
December.....	2,981	7,588	Total.....	34,457	39,974
January.....	2,967	4,341			

Infantile mortality during the fiscal year 1918-19 as compared with 1917-18.

Month.	1917-18			1918-19		
	Under 1 year.	1 to 2 years.	2 to 5 years.	Under 1 year.	1 to 2 years.	2 to 5 years.
July.....	1,019	621	556	712	364	369
August.....	753	535	532	601	325	348
September.....	582	416	406	408	230	282
October.....	646	433	485	572	305	344
November.....	565	356	392	893	519	636
December.....	624	362	362	1,180	708	954
January.....	637	298	352	783	403	440
February.....	519	263	291	626	251	256
March.....	628	262	284	530	157	192
April.....	558	221	227	486	143	174
May.....	500	230	257	544	157	163
June.....	400	187	173	268	104	87
Total.....	7,501	4,184	4,317	7,603	3,666	4,245

MORTALIDAD GENERAL E INFANTIL EN MENORES DE 5 AÑOS

De 0-1. año — De 1-2 años — De 2-5 años —

1917-18

1918-19

0000000000	AÑOS	0000000000
10987654321		10987654321
	JULIO	
	AGOST	
	SEPTI	
	OCTUB	
	NOVIE	
	DICIE	
	ENERO	
	FEBRE	
	MARZO	
	ABRIL	
	MAYO	
	JUNIO	

MORBIDITY—CONTROL OF CONTAGIOUS DISEASES.

As already stated, prior to the present régime due importance was not given to transmissible diseases, although the last years of that régime saw the happy commencement of the era of discoveries by Koch, Pasteur, Manson, Ross, Finlay, Reed, and others, whose scientific works on cholera, malaria, yellow fever, plague, diphtheria, smallpox, typhoid fever, etc., have been of incalculable benefit to mankind. These diseases no longer constitute a menace to civilized countries, for at present their nature, pathogeny, epidemiologic-geographic distribution and means of transmission are sufficiently known, while compulsory notification or report of every one of them is required, as the only means of investigating them in order to prevent their spread. Such declaration was at that time unknown in Porto Rico, but is to-day an unavoidable requirement pursuant to the provisions of section 28 of the sanitary law in force, and of sections 3, 4, and 5 of sanitary regulations No 43.

Compulsory reports permit the application of prophylactic measures not applied before, such as the placard or quarantine flag bearing the name of the transmissible disease; sanitary treatment; vaccinations; preventive inoculation of relatives and neighbors; curative serums and other therapeutic means; disinfectants, fumigation, etc., which day by day have acquired greater clinic and bacteriological efficiency. Such diagnoses, properly confirmed by the respective investigations made by the chemical and bacteriological laboratories of the department of health, in the immense majority of cases contribute to the imposition of executive measures for the control and extinction of such diseases in short periods of time, therefore decreasing mortality.

The rapid control of the plague, of cerebrospinal meningitis, and of other epidemic incidents of recent appearance, confirm the foregoing assertion.

At the time in question it was impossible to practice the means of reducing morbidity, that is, of limiting the development of infectious-contagious nosological species, because of the ignorance (still subsisting, though in a lesser degree) of the rural and even of the urban population, which considered disease as inevitable, the morbid tares as fatal, and epidemics as divine punishment.

The belief in the providential causes of disease, divorced from the mind the idea that health and life depend on the will of man, for it is now known that a great many diseases that kill are governed by causes easily removed, and that epidemics are attributable to the fanaticism, the scepticism of those more impressed by the quack than by the physician; to carelessness; to the filthiness of individuals, and to the nonobservance of the sound precepts and prudent advice of hygiene.

In Porto Rico to-day transmissible diseases are fought with the efficient resources of our sanitary organization which is constantly in action, and not with aphorisms nor with that protocol of false formula which are lost in the sterility of routine. And in this connection it is desirable to state that the susceptibility of typhoid infection caused by antityphoid vaccine was discussed at the International Congress of Hygiene held in Washington in 1912, it having been argued against such assertion that in Porto Rico no case was observed to corroborate such susceptibility. Certainly to Porto Rico belongs the priority of having shown that antityphoid vaccine is innocuous and exempt from danger in time of epidemic.

Antityphoid vaccine was used in 1911 in an epidemic in Peñuelas; later in another in Aguas Buenas, and afterwards in Utuado, its use becoming general all over the island. It is constantly being employed as soon as a report of the disease is received.

In addition, the sanitary education of the people is aimed at by publishing in the press brief weekly reports on transmissible diseases that have occurred, so that proper special precautions may be adopted in each case. Also by the publication of bulletins, pamphlets, reports, and other methods of propaganda, such as antituberculosis exhibitions and moving-picture shows, utilized in the campaign against infant mortality, malaria, and uncinariasis. By their virtuality these means establish intimate intercourse between hygiene and the people.

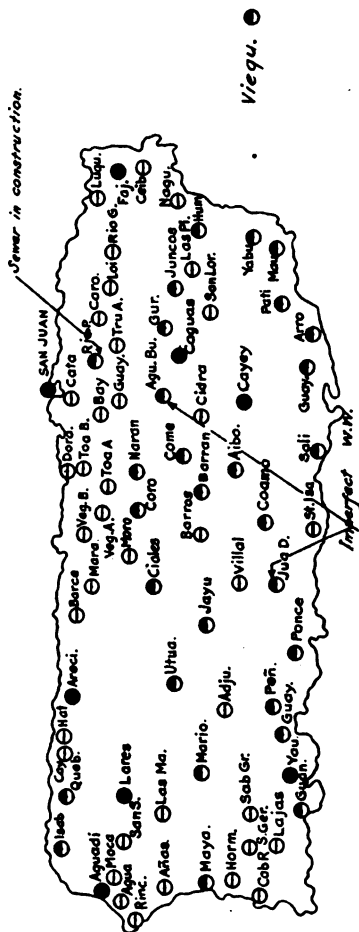
On the other hand, the results obtained by sanitation work in cities are strengthened and confirmed by unquestionable facts. To a greater extent than in other diseases does this happen in dysentery and typhoid fever, which easily yield to such sanitary practice, inasmuch as the supply of water from aqueducts and a good sewerage system in a city reduce when they do not eliminate the prevalence of such diseases, the result being a reduction in the death rate.

The most eloquent proof of this statement is furnished by the city of Caguas, recognized as an endemo-epidemic seat of typhoid fever, and where that disease disappeared from statistics as soon as that city was provided with an aqueduct and a good sewerage system. No deaths have been recorded from typhoid fever in the year 1918-19.

Dysentery has also been gradually decreased, as may be seen in the chapters of this report relating to that disease.

Notas.

1. Los acueductos de San Juan, Ponce, Mayaguez y Juana Diaz fueron construidos antes del año 1898.
2. ...Solamente San Juan tenia en esa época su sistema de alcantarillado.



● Town with Water Work

○ Town with Water Work and Sewer System.

GOVERNMENT OF PORTO RICO
DEPT. OF HEALTH
MAP SHOWING WATER WORKS
AND SEWERS CONSTRUCTIONS
IN TOWNS
Nº 722.....Class 227. P.R. 9-5

In times past water was supplied in the island by utilizing pluvial waters collected in cisterns and barrels which received the water from the roofs of houses, not free from filth and rubbish, and from rivers, brooks, and springs, which were generally contaminated by filth, the washing of clothes, etc., and also from wells and other sources of suspicious salubrity.

Mayaguez, Ponce, Guayana, and San Juan only were provided with waterworks, deficient and imperfect in their construction and not in very enviable sanitary condition, the water from which, as a rule, was contaminated by the presence of numerous diarrheal bacteria and permanently by the *baillus coli-communis*.

There existed no sewerage system except in San Juan, this city being therefore the first town of the island to enjoy the benefits of sanitary plumbing installations subject to plumbing regulations. These regulations have been made extensive to a large number of towns in the island, and regulations now exist governing all plumbing and sewerage works, materials of all sorts, and the construction of cesspools and septic tanks which substitute former latrines which did not represent the unmistakable sign of hygienic progress.

In general terms, it may be stated that the nature or hydrid origin of typhoid fever should not be considered responsible for the disease in Porto Rico.

Neither is the contamination of milk by Eberth's bacillus very frequent, thanks to compliance with sanitary regulation No. 29, promulgated September 30, 1914, relative to dairies, milk depots, and sale of milk, the etiology being reduced to carriers and to the contamination of foodstuffs by flies, which is prevented as far as possible when the provisions of regulation No. 31 on the "Protection of food supplies from contamination and to prevent the breeding of flies," is enforced.

What has been said of typhoid fever may and should also be asserted more emphatically about smallpox. Prior to 1899 hardly a year passed without a record of intense outbreaks and frequently serious epidemics of smallpox, common to all towns of the island, and caused by insufficient and routinary vaccination, although for the last few years there existed a vaccination institute which did not answer the purposes for which it was created.

Such pathological incidents determined the promulgation of general order No. 2 of January 3, 1899, ordering a general vaccination throughout the island, which was carried out in a relatively short period of time. And since that date vaccination has been continued in a constant and systematic way, the almost complete disappearance of the terrible malady having been accomplished.

Sanitary regulation No. 46, "Vaccination," makes the same compulsory, as well as revaccination in periods and under circumstances set forth in said regulation. The department of health keeps a register of vaccination and revaccination of the inhabitants of the island of Porto Rico, showing the names in alphabetical order, ages, residences, and other data deemed necessary to prove that the provisions of the aforementioned regulation are complied with.

In the proper chapter of this report the number of vaccinations performed during the fiscal year 1918-19 is shown.

It should also be stated that excellent results have been obtained in connection with diphtherial morbidity, thanks to the antitoxine vaccine and other prophylactic methods (Schick's test).

The antimosquito campaign against malaria has been of simultaneous effect on filariasis, since, in extinguishing anopheles, other species of mosquitoes are likewise extinguished, among which is the culex, carrier of the latter disease.

On November 24, 1899, Dr. B. K. Ashford discovered the cause of many progressive anemias in the island, which cause was no other than ankylostomiasis duodenal, and ever since work has been going on in the extinction of uncinariasis by means of dispensaries and hospitalization, as may be seen in another chapter hereof.

It may be categorically asserted that since the year 1898, upon cessation of Spanish rule, yellow fever was extinguished in Porto Rico, because, as stated by Dr. Juan Guiteras, "in those places where there is no immigration in large masses the yellow fever parasite is actually dying a natural death, a spontaneous death, through the natural isolation of the sick.

"The native child attacked by yellow fever is surrounded by an immune wall formed by his already immune parents and relatives. The parasite that might be transmitted to them by a mosquito after biting the child dies in their blood, and thus the probabilities of the spread are reduced.

"As opposed to the native family, the movement of troops or the agglomeration of great crowds of nonimmunes constitutes a type of epidemic activity, the latter promoting and the former constituting a barrier against yellow fever.

"And in this manner the downfall of Spanish military power in America has contributed to the extinction of yellow fever."

And Porto Rico can not be an exception as regards these anopheles, which have all the characteristics of an epidemiological postulate.

It is undeniable that Porto Rico during the last few years has experienced a positive sanitary regeneration: Street lighting by electric power in most towns and even in rural sections; good pavement of streets; hygienic improvements in tenement houses; efficient disposal of garbage and rubbish; urbanization of lands; rat proofing of buildings; issuance of health certificates to operatives of all kinds; impounding of stray dogs and other animals, etc.

In sum, for Porto Rico a period has commenced which might be called sanitary maturity, or what amounts to the same, a period when the civic responsibility begins to manifest itself through the regulation of construction of buildings, regulation of traffic, and the adoption of plans for future development of towns on a basis of public health and safety, factors not duly considered in previous years.

In synthesis: Sanitation is synonymous with control of contagious diseases.

MALARIA.

Paludism showed its pernicious influence on the rural population during the influenza epidemic by manifesting through eloquent statistical figures that the malaric regions of the island, so far as morbidity and mortality are concerned, closely followed those regions, as regards the pandemic, in which ankylostomiasis prevailed.

Sanitary normality having been restored, malaria continues as in previous years to hold second place on the statistical tables because of its coefficient as regards total mortality. This circumstance justifies the intense activities of dispensaries and general sanitation work, though such activities and work must be principally specialized in Guayama, Patillas, Salinas, Guanica, Vega Baja, and Barceloneta, regions where the disease is wont to acquire the characteristics of positive endemo-epidemics during certain periods and seasons of the year.

It was impossible to establish either permanent or static, or ambulant or dynamic, hospitalization because of small appropriations for combating malaria. The department trusts that such hospitalization will become a reality under the appropriation made in the budget for the ensuing year and subsequent amounts appropriated which will be sufficient for the purpose.

The legislature of Porto Rico passed act No. 66, "Appropriating the sum of \$40,000 for the construction of four buildings, at the rate of \$10,000 each, two of which shall be hospitals for studying and combating uncinariasis, and the other two for malaria, and for other purposes."

The prophylaxis of the disease by immunizing the healthy in malaric localities was strengthened by a persistent propaganda of preventive vulgarization by means of educative cards profusely distributed among the peasant class, and very especially in rural schools, in which work the teachers in said schools rendered invaluable aid.

Determination of the endemic index in regions most punished by the disease has been but slightly outlined because of lack of technical personnel to carry on the necessary and continuous hematologic examination and the examination of the spleen of children, known as it is that through such examinations, together with the examination of mosquitoes by an entomologist or expert in such work, the base and scientific foundation of an effective prophylaxis is laid.

Three thousand one hundred and thirty examinations of blood were made in the laboratory, which gave the following result:

Negative examinations.....	2,461
Plasmodium vivax.....	364 positive.
Plasmodium falciparum.....	304 positive.
Plasmodium malarie.....	1
Total.....	3,130

There were recorded in the island 1,576 deaths from paludism as against 1,528 in the preceding fiscal year; that is, 48 more deaths this year.

In one month of activity (June, 1919) the antimalaria dispensary at Guanica did work according to the following synopsis:

Synopsis of the antimalarial campaign at Guanica during the month of June, 1919.

Under 8 years.....	18	Color:	
Over 8 years and less than 15.....	17	White.....	60
Over 15 years and less than 30.....	35	Colored.....	21
Over 30 years and less than 50.....	17	Total.....	90
Over 50 years.....	3		
Total.....	90	Diagnoses:	
Cases:		Hematologic—	
Yager.....	12	Positive—	
Cruz.....	2	V. Vax.....	16
Julio.....	28	Fac.....	2
Dr. Veve.....	3	Negative.....	72
13 Marzo.....	3	Total.....	90
Santa Rosa.....	7		
San Miguel.....	2	Clinic—	
Quinones.....	4	Positive.....	90
Victoria.....	5	Negative.....	76
Carcel.....	6	Total.....	166
Hospital.....	1		
Barrios:		Uncinaria—	
Santa Rita.....	3	Positive.....	6
Eusemada.....	3	Negative.....	4
Cano.....	1	Total.....	10
Limon.....	1		
Playa.....	4	Other diseases—	
Tumbado.....	1	Typhoid.....	2
Maria Antonia.....	4	Measles.....	1
Total.....	90	Total.....	3
Sex:			
Male.....	50		
Female.....	40		
Total.....	90		

HISTORY OF INFLUENZA IN PORTO RICO.

The first outbreak of a disease of epidemic character, with extensive morbidity, but not alarming mortality in proportion to the number of persons attacked—that is, in a mild form, though cases of broncho-pulmonary complications with their consequent number of deaths were not wanting—made its sudden appearance in the city of San Juan during the second fortnight of the month of June, 1918. The disease was influenza.

Simultaneously there appeared certain febrile affections of short duration, caused, no doubt, by the dipterous insect *phlebotomus pappataci*, carrier of the unknown agent of the so-called pappataci fever. At about the same time the refuse and garbage of the city and suburbs was not removed for a period of six days due to a strike of street sweepers, a circumstance which sufficiently explains the spread of the so-called three-day fever.

At the same time there appeared another febrile process having the characteristic syndrome of dengue, which process was accompanied by the eruption which is peculiar to dengue and which commences on the third day, in a large number of cases the so-called precocious eruption of the first day having been observed. This coexistence gave rise to the error of calling cases of influenza by the name of dengue, no doubt on account of the similarity between the two morbid processes, their essential differences having been overlooked, known as it is that gripe is generally accompanied by catarrh of the air passages, a catarrh which is not observed in dengue, while on the other hand, the eruption existing in dengue is extremely rare in influenza.

Some members of the medical profession then commenced to designate the disease by the inadequate name of Spanish influenza as if it were a new nosological species, when it was and is nothing more than influenza undefined by any adjective to differentiate or typify it, as will be shown further on, since the present pandemic is absolutely identical, notwithstanding its pneumonic, meningeal, and digestive polymorphism, to that of 1889-90. In fact, both pandemics originated in Central Asia, having later been imported, during the early part of 1918, into some of the Mediterranean ports, from where it spread in a short time to different countries of Europe, crossed the Atlantic and entered the United States of America where it acquired a maximum of intensity almost incredible. That it followed the same course as its congener, that is, from east to west, is an unquestionable fact.

Now, then, it is pertinent to state certain antecedents to determine the source or origin of the disease so far as relates to Porto Rico. On June 13, 1918, the Spanish S. S. *Patricio de Satrustegui* arrived at the port of San Juan from Spanish ports, having had 30 cases of influenza on board during the voyage. Of this number five cases remained in the ship's hospital when she reached San Juan. The ship had free communication with land since the disease was not considered quarantinable, while on the other hand many of the passengers were bound for Porto Rico. This fact, through its essentiality constitutes clear evidence as to the origin of the first outbreak, which developed six or eight days later, and, moreover, it is a circumstance meriting attention that the epidemic started in the suburb of Puerta de Tierra, a district of recognized insalubrity where live a large number of the workmen engaged in the work of loading and unloading at the piers and on steamers, and who transmitted the disease to no small number of laborers of the Porto Rican American Tobacco Co. Said disease then continued its course of invasion throughout the city, very much as a fuse to which fire is applied.

The celebration of the national festivity of the Fourth of July, anniversary of American independence, drew to San Juan a big crowd from the rural sections, who came to visit recruited relatives at Camp Las Casas. Upon returning home they carried the disease with them, as proved by the fact that from that date cases began to be reported from many towns of the island, though as yet in the mild form in which it appeared in San Juan.

On September 28, 1918, the Brazilian S. S. *Benavente*, from New York, was forced to enter this port for repairs. She had 59 cases of influenza on board, some of them with serious complications of the respiratory system, three of the patients having died on land. They were landed at the quarantine station at Miraflores, where they were hospitalized in tents and treated by military doctors and their assistants.

Without endeavoring to establish and derive a forcible relation between cause and effect, it is unquestionable that a few days later Camp Las Casas was invaded by the epidemic, and either through visits of relatives to recruits or through visits of recruits to their homes in different towns of the island, there appeared what might be called the second outbreak, which spread all over the territory, showing a clinic character of unusual seriousness due to its rapid dissemination, broncho-pulmonary, pulmonary, and pleuric complications, and the sudden and ever-increasing mortality, circumstances both of which caused new controversies as to the identity of the nosological species, which people took to calling Spanish influenza.

The grippal physiognomy of the epidemic in Porto Rico during this second outbreak was typical, and therefore, unquestionable, leaving no room for doubt of any kind. Here, as elsewhere, the physicians of the quarantine hospital of San Juan, those of the emergency hospitals, and those of the base hospital, observed cases where enormous amounts of streptococcus existed in the pulmonary exudations; others showing streptococcal and pneumonic associations; others showing hemolytic staphylococcus, as well as Friedlander's bacillus, the hemolytic streptococcus characteristic of infections of the respiratory system having been confirmed in several cases.

Studying statistical figures under an epidemiologic aspect, a double and even triple average of mortality is observed, according to the epidemic period considered, when such period is compared with the same months of the previous year.

The relation of mortality to morbidity was a problem difficult to solve with rigorous exactness, and this is explainable, since deaths were recorded in the statistics in accordance, as far as possible, with diagnostic truth, while the majority of persons attacked were not reported because individual declaration was not compulsory, while on the contrary collective investigation, as stated hereinafter, was required with a view of obtaining within discreet limits the total number of patients, it having been shown that the average mortality from influenza was 4.20, including all complications, especially those of the respiratory system.

In the base hospital, an excellent institution provided with the latest clinic-sanitary and therapeutic improvements, with a splendid laboratory and with a highly competent technical personnel, 1,910 cases of influenza were treated, with a total number of 65 deaths, which gives a percentage of 3.40. Sight should not be lost of the fact that in this hospital the disease developed among recruits scrupulously selected by virtue of the compulsory military service.

The protection and sanitary measures adopted by the department of health were identical with those taken in the United States and European countries, but under the unfavorable conditions caused by the war, with scarcity of articles of prime necessity and the absolute lack of some of them, such as rice, milk, etc., as well as with the lack of drugs, chemical products, clothing, hospital material and medical personnel, pharmacists and nurses, who had to be improvised, since the greater part of the former were rendering services at Camp Las Casas and in the base hospital already mentioned. These deficiencies, if lamentable in any epidemic, were very much

more so in connection with influenza, against which the struggle is very difficult, not to say impossible, from the epidemiologic point of view, the sanitary organizations of no country being, therefore, responsible for unavoidable facts.

Mortality from influenza, broncho-pneumonia, and pneumonia throughout the island during the months of October, November, and December, 1918, and January and the first two weeks of February, 1919.

Estimated population, 1,258,970.

	Deaths.	Proportion per thousand.	Percent-age of mortality.	Number of cases of influenza in the island
Influenza.....	7,364	5.85	2.85	261,828
Broncho-pneumonia.....	1,646	1.31	.63	
Pneumonia.....	1,878	1.49	.70	

DEATHS FROM INFLUENZA.

Lares.....	487	Vieques.....	66
Utuado.....	464	Albionito.....	60
Ponce.....	426	Guaynabo.....	60
Mayaguez.....	290	Gurabo.....	60
San Sebastian.....	286	Barranquitas.....	59
Adjuntas.....	281	Arecibo.....	58
Moca.....	194	Penuelas.....	58
Patillas.....	191	Juana Diaz.....	55
Anasco.....	185	Toa Alta.....	54
Guayama.....	180	Luquillo.....	52
Barros.....	176	Maricao.....	50
Loiza.....	166	Fajardo.....	38
Rincon.....	148	Cidra.....	37
Isabela.....	142	Rio Piedras.....	37
Cayey.....	142	Comerio.....	35
Cabo Rojo.....	129	Toa Baja.....	32
Aguadilla.....	128	Trujillo Alto.....	31
Aguada.....	126	Camuy.....	30
Yauco.....	120	Caguas.....	29
Morovis.....	119	Vega Baja.....	29
Manati.....	115	Dorado.....	22
Las Marias.....	110	Jayuya.....	28
San Juan.....	101	Hatillo.....	26
Barceloneta.....	106	Quebradillas.....	22
Las Piedras.....	106	Ceiba.....	22
Salinas.....	105	Juncos.....	19
Ciales.....	104	Lajas.....	19
Humacao.....	104	Naran'ito.....	18
Coamo.....	102	Guanica.....	16
Guayama.....	102	Santa Isabel.....	15
Coroico.....	102	Arroyo.....	13
Villalba.....	100	Hormigueros.....	12
Bayamon.....	87	Naguabo.....	12
Rio Grande.....	83	Sabana Grande.....	4
San German.....	82	Vega Alta.....	2
Mamabo.....	77	Culebra.....	2
San Lorenzo.....	70	Carolina.....	1
Yabucoa.....	78		
Agua Buenas.....	67	Total.....	7,364

DEATHS FROM BRONCHO-PNEUMONIA AND PNEUMONIA.

Mayaguez.....	259	Adjuntas.....	57
Caguas.....	230	Rio Piedras.....	57
Ponce.....	189	Yauco.....	57
San Juan.....	173	Comerio.....	56
Arecibo.....	174	Bayamon.....	53
Penuelas.....	114	Quebradillas.....	53
Las Piedras.....	101	Vieques.....	53
Santa Isabel.....	92	Aguadilla.....	49
Utuado.....	93	Villalba.....	48
Cabo Rojo.....	69	Rio Grande.....	47
Fajardo.....	71	Luquillo.....	44
Guayama.....	70	Humacao.....	42
Juana Diaz.....	72	Salinas.....	41
Cidra.....	60	Anasco.....	41
Fajadon.....	60	Toa Alta.....	41
Sabana Grande.....	66	Camuy.....	40
Cayey.....	63	Ciales.....	39
Hormigueros.....	62	Guanica.....	30

Mortality from influenza, broncho-pneumonia, and pneumonia throughout the island during the months of October, November, and December, 1918, and January and the first two weeks of February, 1919—Continued.

DEATHS FROM BRONCHO-PNEUMONIA AND PNEUMONIA.

Guayama.....	30	Isabela.....	11
Maricao.....	30	Hatillo.....	12
San Lorenzo.....	29	Patillas.....	11
Ceiba.....	27	Lajas.....	12
Las Marias.....	27	Vega Baja.....	12
San Sebastian.....	27	Toa Baja.....	11
Barros.....	26	Aguada.....	9
Dorado.....	26	Carolina.....	8
Gurabo.....	25	Guaynabo.....	8
Morovis.....	25	Naumabo.....	8
Lares.....	24	Corozal.....	7
Manatí.....	24	Naranjito.....	7
Vega Alta.....	24	Rincon.....	7
Barceloneta.....	23	Trujillo Alto.....	6
Coamo.....	23	Loiza.....	6
Naguabo.....	23	Moca.....	6
Aibonito.....	20	Jayuya.....	6
Barranquitas.....	20	Culebra.....	1
Juncos.....	20		
San German.....	18	Total.....	1,528
Arroyo.....	14		

Summary of patients admitted to influenza hospitals and summary of nonhospitalized patients.

Towns.	Hospitalized patients.	Non-hospitalized patients.	Total.	Towns.	Hospitalized patients.	Non-hospitalized patients.	Total.
Adjuntas.....	58	6,107	6,165	Lajas.....	112	1,800	1,912
Aguada.....	891	891		Las Marias.....	214	7,000	7,214
Aguadilla.....	101	3,506	3,607	Las Piedras.....	58	1,200	1,258
Aguas Buenas.....		1,010	1,010	Lares.....	282	9,800	10,082
Aibonito.....	81	1,980	2,070	Loiza.....	208	5,000	5,208
Anasco.....	142	6,230	6,372	Luquillo.....	46	2,000	2,046
Arecibo.....	446	6,855	7,301	Manatí.....	143	2,000	2,143
Arecibo (Garrochales).....	103	600	703	Maricao.....	100	4,000	4,100
Arroyo.....		2,400	2,400	Maunabo.....	60	3,000	3,060
Barceloneta.....	176	1,900	2,076	Mayaguez.....	229	6,500	6,729
Barceloneta (Florida).....	115	785	900	Moca.....	30	2,500	2,530
Barros.....	70	2,000	2,070	Morovis.....	36	3,071	3,107
Barranquitas.....	145	3,631	3,776	Naguabo.....		1,200	1,200
Bayamon.....		1,500	1,500	Naranjito.....		808	808
Cabo Rojo.....	94	3,105	3,199	Patillas.....	147	4,500	4,647
Caguas.....		6,697	6,697	Penuelas.....	125	2,000	2,125
Camuy.....	60	1,500	1,560	Ponce (Concordia).....	400		400
Carolina.....		162	162	Ponce (Canas).....	604	6,500	7,104
Cataño.....		297	297	Quebradillas.....	118	2,495	2,613
Cavey.....	104	3,405	3,509	Rincon.....	106	3,000	3,106
Ceiba.....		852	852	Rio Grande.....	142	2,500	2,642
Ciudad.....	191	4,500	4,691	Rio Piedra y Trujillo Alto.....	30	4,357	4,387
Cidra.....	55	3,270	3,325	Sabana Grande.....		3,527	3,527
Coamo.....	21	3,000	3,020	Salinas.....	176	4,500	4,676
Comerio.....		4,055	4,055	San German.....	150	4,508	4,658
Corozal.....	139	3,000	3,139	San German (Bo. Rosario).....	103	1,200	1,303
Dorado.....	123	1,000	1,123	San Juan.....	293	2,391	2,684
Fajardo.....	345	4,007	4,352	San Lorenzo.....		2,900	2,900
Guánica.....	66	2,073	2,139	San Sebastian.....	128	9,000	9,128
Guayama.....	223	7,061	7,284	Santa Isabel.....	241	3,000	3,241
Guayanilla.....	118	3,500	3,618	Toa Alta.....	99	2,011	2,110
Guaynabo.....	61	2,000	2,061	Toa Baja.....		988	988
Gurabo.....		3,800	3,800	Utua.....	311	17,000	17,311
Hatillo.....		1,500	1,500	Vega Alta.....	138	1,652	1,790
Hormigueros.....	22	1,488	1,512	Vega Baja.....	147	2,000	2,147
Humacao.....	179	5,300	5,479	Vieques.....	10	1,000	1,010
Isabela.....	58	3,200	3,258	Villalba.....	436	3,500	3,936
Jayuya.....		3,268	3,268	Yabucoa.....	85	2,500	2,585
Juana Díaz.....	64	2,805	2,869	Yauco.....	106	3,000	3,106
Juncos.....		1,805	1,805				

RECAPITULATION.

Hospitalized patients.....	1,497
Nonhospitalized patients.....	252,400
Grand total.....	253,897

NOTE.—Influenza not being included among transmissible diseases, the figure of \$1,828 at which the persons attacked by the pandemic in Porto Rico is estimated, if not mathematically exact, has been obtained through different channels worthy of the greatest credit, which allow the granting to it of such character. And it may even be ratified without fear of exaggeration in our appreciation, provided we consider the dissemination of the inhabitants of the rural zone and the difficulty of access to many of such zones, though sanitary action has reached the most distant confines of the island through special physicians in the service of the department and the chiefs and inspectors of health who have furnished sufficiently exact data which, together with the data furnished by the mayors, charity physicians, hospital physicians, rural teachers, ward commissioners, insular police, etc., authorize the statement of said figure as exact for statistical purposes.

And as a matter of information it is pertinent to state that from trustworthy information from Washington it may be deduced that out of 338,257 cases of influenza registered in the American Army, 17,000 deaths were caused by the disease and its complications.

Henry Moir, chairman of the Society of Actuaries of America, in a speech delivered before the Association of Presidents of Life Insurance Companies of New York, made the statement that about 400,000 deaths had occurred in the United States, which represented an unusual financial loss.

In Spain 200,000 deaths were registered in five months.

The City of Mexico saw its mortality increase to the average of 250 deaths a day, against 75, which was the normal average before the epidemic.

The English paper, *The Times*, estimates at five millions the victims of the disease for the whole world.

And in all countries the influenza contributed to intensify the tuberculosis obituary.

Amounts expended for each town of the island from the \$300,000 appropriated by the legislative assembly of Porto Rico to combat influenza (act approved Dec. 4, 1918).

Adjuntas.....	\$2,890.55	Luquillo.....	\$1,791.74
Aguada.....	1,211.13	Las Piedras.....	2,303.11
Aguadilla.....	3,211.28	Manatí.....	4,088.99
Agua Buenas.....	2,455.10	Maricao.....	2,484.39
Aibonito.....	2,503.10	Munabo.....	2,503.92
Anasco.....	2,243.51	Miyaguez.....	6,221.96
Arecibo.....	11,741.59	Moca.....	2,649.19
Arroyo.....	1,563.16	Morovis.....	2,830.16
Barceloneta.....	4,751.34	Naguabo.....	1,607.05
Barceloneta ("Florida Adentro").....	355.95	Naranjito.....	954.26
Barranquitas.....	3,231.58	Patillas.....	2,018.19
Barreros.....	1,890.26	Penuelas.....	2,445.17
Bayamon.....	1,947.54	Ponce.....	20,233.91
Cabo Rojo.....	3,217.98	Quebradillas.....	3,203.83
Camaguey.....	2,587.24	Rincon.....	2,900.28
Canas.....	1,742.16	Rio Grande.....	3,605.86
Carolina.....	1,071.25	Rio Piedras.....	2,531.26
Cayey.....	5,218.09	Sabana Grande.....	3,020.37
Cebu.....	1,231.68	Salinas.....	2,813.66
Ciego.....	4,013.69	San German.....	3,903.20
Cirio.....	2,560.67	San German ("Rosario").....	1,331.44
Cuma.....	2,016.09	San Juan (Quarantine Hospital).....	29,365.15
Cumero.....	2,277.26	San Lorenzo.....	1,763.17
Cruzal.....	2,540.23	San Sebastian.....	3,564.51
Cura.....	2,491.85	Santa Isabel.....	2,412.62
Curipe.....	6,272.82	Toa Alta.....	1,631.27
Cuyamabo.....	2,635.47	Toa Baja.....	920.94
Cyanita.....	1,133.69	Toa Baja ("Palo Seco").....	543.04
Cyanita ("Ensenada").....	1,310.63	Trujillo Alto.....	820.62
Cyanita.....	3,961.46	Utua.....	5,109.58
Cyanita.....	2,279.35	Vega Alta.....	2,145.46
Cyanita.....	1,843.02	Vega Baja.....	2,227.76
Cyano.....	1,877.91	Vieques (Island).....	5,030.91
Cyano.....	1,053.88	Culebra Island.....	628.94
Cyano.....	4,537.84	Villalba.....	1,642.27
Cyano.....	2,032.60	"Garrochales," Arecibo.....	827.82
Cyano.....	1,312.39	Yabucoa.....	2,852.71
Cyano.....	2,443.48	Yauco.....	2,979.68
Cyano.....	1,710.85		
Cyano.....	2,114.06		
Cyano.....	5,403.18		
Cyano.....	2,472.99		
Cyano.....	4,397.88		
		Total.....	258,029.32
		Medicines and clothing in stock.....	21,643.52
		Total expended.....	279,672.84

Statement showing amounts expended by the department of health in connection with the influenza epidemic from Dec. 4, 1918, to June 30, 1919, and the balance June 30, 1919.

Personnel and services.	Amount appropriated.	Paid.	Pending payment.	Total expended.	Balance.
Suppression of influenza, no fiscal year: Amount appropriated by act approved Dec. 4, 1918.....	\$300,000.00				
Repayments.....	215.94				
	<u>\$300,215.94</u>				
General expenses:					
Personnel: Salaries of physicians, nurses, clerks, practicanes, etc.....		\$13,788.12		\$13,788.12	
Labor: Hospital employees, transportation of patients and corpses, packing hospital materials, etc.....		17,982.54		17,982.54	
Fuel.....		461.51		461.51	
Traveling expenses, including per diem allowances to physicians, military officers, nurses, hire of automobile and coaches.....		11,854.15		11,854.15	
Clothing and bedding, including all supplies for hospitalized and nonhospitalized patients.....		64,720.69	\$700.00	65,420.69	
Postage and freight, transportation of food supplies and hospital material.....		6,206.17		6,206.17	
Incidentals: Kitchen and dining room utensils, coffins, interments, painting of and repairs to school buildings used as hospitals, disinfections, laundry, etc.....		16,928.93	500.00	17,428.93	
Subsistence of hospitalized patients and distribution of food supplies to indigent patients not hospitalized.....		97,727.29	2,700.00	100,427.29	
Rent of houses for hospitals and to be used for the storage of school material from the school buildings used as hospitals.....		145.68		145.68	
Subsistence of hospital personnel throughout the island.....		1,475.14		1,475.14	
Lighting and water.....		792.17	22.11	814.28	
Telegraph and telephone service.....		827.53		827.53	
Medicines and supplies.....		30,169.76	3,500.00	33,669.76	
Unexpended property, including office and hospital furniture, 1 ambulance, 2 automobiles, and 2 trucks.....		9,161.05		9,161.05	
Total.....	300,215.94	272,240.73	7,422.11	279,662.84	\$20,553.10

RECAPITULATION.

Amount appropriated.....	\$300,000.00
Repayments.....	215.94
Total available.....	300,215.94
Total amount expended.....	279,662.84
Balance.....	20,553.10

TUBERCULOSIS.

The terrible problem of tuberculosis continues unsolved, and day by day the characteristics of extreme seriousness become more accentuated notwithstanding the constant efforts and energy displayed by the department which out of its own funds maintains the Ponce sanatorium, the Yauco hospital (donated by the philanthropist Arturo Lluveras), and the tubercular patients confined in part of the quarantine hospital of San Juan.

While not denying the pernicious influence of gripe on the evolutive course and fatal termination of tuberculosis, since it acts on persons liable to the latter disease simultaneously with the scarcity and inferior quality of foodstuffs brought about by the war, the number of deaths from phthisis has increased during the fiscal year under discussion. It is not less true, however, that such increase is also due to other causes the removal of which is urgent and imperative.

Tuberculosis is not only a disease, it is also the index of the social, economic, and philanthropic condition of a people. The exclusive action of the government and sanitary authorities does not suffice. The cooperation and efforts of all those who can and should assist in improving such economical and social conditions are required.

In this connection, the department of health is constructing a sanatorium and a hospital, convinced of the fact that the sanatorium alone, while reducing the morbidity and mortality from tuberculosis, requires as a complement the permanent

hospitalization and segregation from the community of all incurable cases of tuberculosis. It is pertinent to state that many generous persons have answered the call made in this direction.

It is not surprising, then, if a sound and discreet optimism consoles the spirit which is open to all hopes and furnishes a provision of better and not distant days when the triumphal hymn of a great hygienic-social progress may be sung. Such progress will be the inauguration of the insular sanatorium in the neighboring town of Rio Piedras, on lands donated by Mr. Pedro Arzuaga. This sanatorium will honor Porto Rico, its possessor.

During the fiscal year ended June 30 last, 2,503 deaths from pulmonary tuberculosis were recorded, and 171 from the other forms of the disease, as against 2,292 and 213, respectively, in the fiscal year 1917-18.

Deaths from tuberculosis.

	Fiscal year 1917-18.	Fiscal year 1918-19.
Pulmonary tuberculosis.....	2,292	2,503
Nonpulmonary tuberculosis.....	213	171
Total.....	2,505	2,674

As may be observed, closed tuberculosis has decreased, while open tuberculosis, whose type is pulmonary tuberculosis, has increased, which increase is explained in the chapter on influenza.

There were reported during this year 1,709 cases less than the number of deaths recorded, and last year the number of cases reported was 1,218 less than the number of deaths recorded, a circumstance which shows a great deficiency in statistical information, so absolutely necessary because without such information it is impossible to appreciate the results of any of the preventive measures adopted and of an efficient prophylaxis.

Now, then, the department of health has pursued, with the scanty means at its disposal for the fight against tuberculosis, the three finalities constituting the treatment of this terrible transmissible disease: The cure of the patient, should the same be possible; the patient's improvement, whether or not the case is curable; to prevent the spread of the disease to the healthy.

To obtain the first end dispensaries have been established at Ponce, Mayaguez, and Guayama. These dispensaries are rendering good service notwithstanding the fact that they have not yet acquired full development. They commence their work at the same time as the disease, and hence allow of an early or precocious, or of an advanced diagnosis, thus establishing a plan of treatment which in the first case is nothing but the sanatorium and in the second case hospitalization.

The department is constructing a sanatorium to substitute the one formerly existing at the Seboruco, which was destroyed to establish on the grounds some dependencies of Camp Las Casas.

This sanatorium, located in the neighboring town of Rio Piedras, at present consists of 14 small buildings, constructed from funds of the treasury of Porto Rico and eight from private donations, as follows: Dr. Santiago Veve Calzada, Hon. Eduardo Giorgetti, Hon. Jorge Bird Arias, Hon. Jose J. Benitez, Hon. Arturo Lluveras, Hon. Federico Calaf (two buildings), the Fajardo Sugar Co.

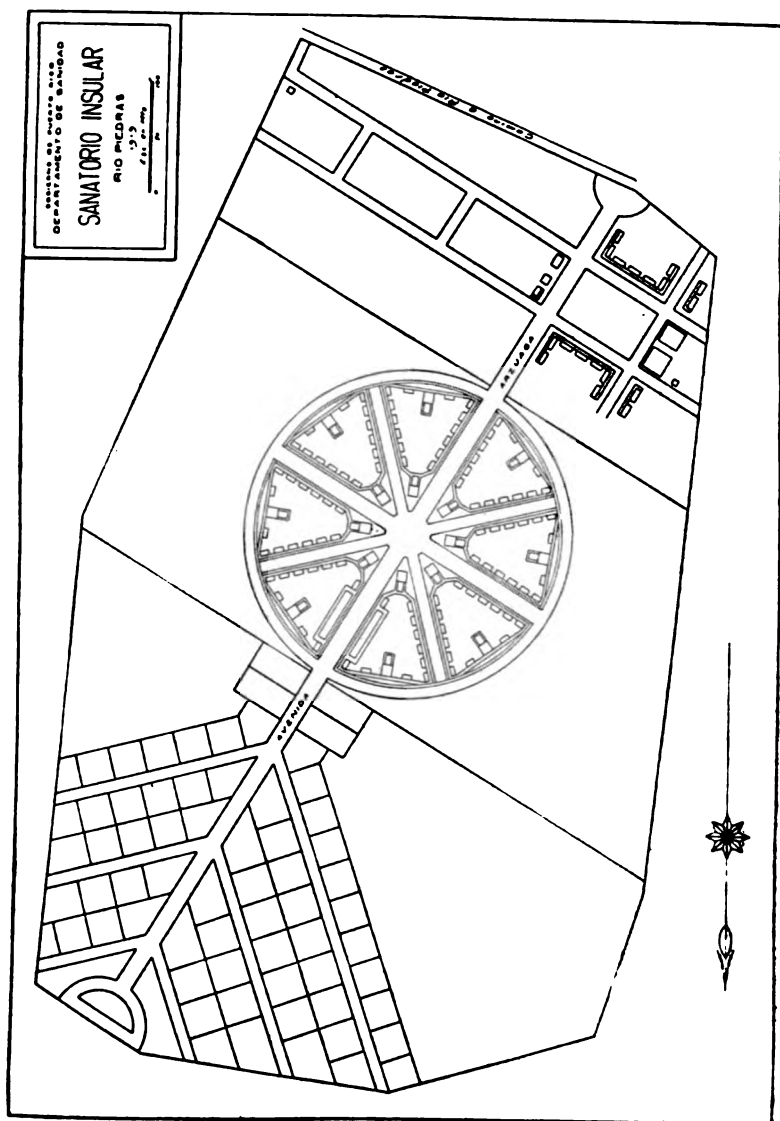
There are three other buildings, one constructed by the employees of the department of health, and the others with proceeds from moving-picture shows on the island.

Each building has capacity for four patients, and cost approximately \$2,000.

And for those unfortunates who called at the dispensary too late, a hospital is being constructed on the lands of the sanatorium, which are extensive and at a convenient distance from the same.

Meanwhile part of the quarantine hospital at San Juan has been equipped for the isolation and treatment of the greatest number possible of tubercular patients under the competent direction of Dr. Coronas.

The sanatorium of the Antituberculosis League of Ponce and the hospital for tuberculous patients, constructed and donated to the municipality of Yauco by Mr. Arturo Lluveras, are dependent on and maintained by this department.



Deaths from tuberculosis in the island of Porto Rico during the fiscal year 1918-19.

Municipality.	Number of deaths.	Municipality.	Number of deaths.
San Juan.....	350	Moca.....	20
Ponce.....	237	Guaynabo.....	19
Mayaguez.....	129	Toa Baja.....	18
Arecibo.....	120	Vieques.....	18
Aguadilla.....	108	Albionito.....	17
Caguas.....	106	Coamo.....	16
Bayamon.....	100	Hatillo.....	16
Manati.....	66	Las Marías.....	16
San German.....	66	San Lorenzo.....	15
Cabo Rojo.....	59	Barros.....	14
Guayama.....	55	Guanica.....	14
Rio Piedras.....	54	Aguada.....	12
Yanco.....	52	Camuy.....	12
Cayey.....	51	Moro Is.....	12
Humacao.....	46	Rincon.....	12
Anasco.....	44	Trujillo Alto.....	12
Fajardo.....	44	Hormigueros.....	11
Salinas.....	38	Gurabo.....	10
Yabucoa.....	38	Naranjito.....	10
Ut'ado.....	34	Quebradillas.....	10
Ciales.....	33	Penuelas.....	9
Juana Diaz.....	33	Carolina.....	8
Vega Baja.....	32	Loiza.....	8
Barceloneta.....	30	Rio Grande.....	8
Cidra.....	30	Lares.....	7
Corozal.....	30	Adjuntas.....	6
Santa Isabel.....	29	Maunabo.....	6
Isabela.....	28	Ceiba.....	5
San Sebastian.....	27	Vega Alta.....	5
Comerio.....	26	Barranquitas.....	4
Juncos.....	26	Dorado.....	4
Patillas.....	26	Aguas Buenas.....	3
Sabana Grande.....	26	Jayuya.....	3
Naguabo.....	25	Luquillo.....	3
Guyanilla.....	23	Las Piedras.....	1
Lajas.....	23	Maricao.....	1
Arroyo.....	22	Culebra.....	1
Toa Alta.....	22		
Villalba.....	21	Total.....	2,674

UNCINARIASIS.

This problem, under the triple aspect which characterizes it, biological, economical, and social, has been and continues to be of incalculable magnitude. Theoretically, its solution at first sight seems to be of great simplicity, if consideration is given to the fact that there exists no other parasitic disease so well studied in clinic and laboratory. The theory is synthesized in these postulates: "To locate patients and treat them; to prevent infection and reinfection."

But in practice the means of obtaining such ends, when not shattered, encounter difficulties which if not insurmountable are very hard to overcome and remove, and which may be reduced to one: In the first place, lack of proper cooperation on the part of the patients who are the ones positively benefited, and then the same lack of cooperation on the part of the owners of the estates where such patients work. This cooperation is as elementary and necessary as that of the patients. If property owners were willing, and they should be, they would soon experience and feel the benefits of an efficient work derived from the restored health and physical energy of the Porto Rican peasant.

On the other hand, the work in fighting uncinariasis is arduous and difficult. To examine all of the inhabitants of an infected section is not a slight task. Moreover, a large number of those who submit to examination do not follow the treatment prescribed for them at the dispensary, and those that do, never do so for the period of time necessary to obtain a cure. For this reason, in the annual report for 1917-18, the following statement is made: "Such campaign defines new methods and establishes more positive procedure for the action or manner of operating anemia dispensaries in accordance with the sound practice dictated by experience. In other words, a maximum of work in minimum time would be done by having the personnel of the dispensaries proceed in search of persons conveying the parasite in order to follow and to watch them, and wherever possible to place them in hospitals for treatment until completely cured."

Our country people lack the necessary confidence to willingly accept such scientific requirements. They do not believe in their efficacy because they are not sufficiently informed as to the sad consequences of the malady. They do not, can not understand the immense significance of the purity of drinking water, of clean hands, and of the scattered disposal of feces anywhere on the soil devoted to the cultivation of products peculiar to this country. They consider latrines and shoes a luxury, such things not being to them ineludible hygienic exigencies. And hence, the urgency of hospitalization as a simultaneous curative and educative factor.

Jointly with the dispensary, hospitalization concentrates as far as possible within a given area all efforts to control uncinariasis and reinfection.

Hospitals may be stationary or permanent and ambulant. The first should be located in places where statistics have shown the disease to be most prevalent, and easily accessible to the largest possible number of wards of the jurisdiction. Ambulant hospitals should be located in the wards most distant from the permanent hospitals and with the assistance of the dispensaries should work for longer or shorter periods of time according to the extent, grade, and intensity of the infection. They should then proceed to another place, and so on, successively. The fight against uncinariasis thus conducted is more definite, more efficient, and of more positive and lasting results.

In the Balkans, especially in Macedonia, hospitalization assisted by the dispensary has practically eradicated malaria. In British Guiana both methods are at present giving marvelous results in the extinction of uncinariasis.

As auxiliary measures of great efficacy, the campaign of incessant educative publicity, lectures in all the schools, especially in the rural schools, profuse distribution of pamphlets on this parasitic disease, written in plain language within reach of all intellects, exhibitions and moving pictures shows where possible, and all those activities which constitute practical teaching for our country people, should not be forgotten.

The sanitary work of this department may be appreciated by an analysis of the table showing the activities of the dispensaries of the island during the fiscal year, and of the investigation carried out by Dr. Giuliani relative to the treatment of uncinariasis by means of beta naphthol, thymol, and chenopodium oil, which investigation gave the following results:

There were brought to the insular sanatorium under construction 23 patients from Utuado, a section known for its high figure of intestinal infection by abnormal parasites. These patients were sheltered in tents (as in an ambulant hospital) and were furnished with adequate food, mosquito bars, baths, latrines, and other necessary hygienic commodities, as a means of education.

The following table shows the ages of the patients:

From 8 to 10 years.....	4
From 10 to 20 years.....	7
From 20 to 35 years.....	2
From 35 to 40 years.....	5
From 40 to 50 years.....	3
Over 70 years of age.....	1
Total.....	23

The hematological examinations to determine the percentage of hemoglobin showed:

	Per cent.
The highest percentage found.....	38
The lowest.....	10
Average.....	25.8

Microscopic examination of feces made upon admittance revealed a very prolific and varied intestinal fauna.

	Cases.
Uncinaria ova in.....	23
Ova of trichocephalus.....	22
Ova of ascarides.....	8
Ova of bilharzia.....	1
Ova of anguillidae.....	2

These parasites were found associated in the following manner.

	Times.
Uncinaria and trichocephalus.....	23
Uncinaria, trichocephalus, and ascarides.....	6
Anguillidae, uncinaria, trichocephalus, and ascarides.....	2
Bilharzia, uncinaria, trichocephalus, and ascarides.....	1

Upon initiating treatment, the patients were divided into groups of six. They were given 10 drops of chenopodium oil in the morning and two hours later a purge of castor oil. The examination of feces revealed the presence of intestinal worms, but in

reduced numbers. This amount of oil should not be considered sufficient to effect a cure.

At the end of one week after this first test there was administered to the groups under observation the same quantity of oil preceded by a laxative the night before. The microscopic examination of feces continued to reveal ova of uncinaria.

On May 10 the administration of chenopodium oil in doses of 10 drops each morning for three consecutive days was commenced. On the third day they were given a dose of castor oil two hours after the last dose of chenopodium. Both the macroscopic and microscopic examination of feces revealed the successful effect of the drug, for it was very difficult to find ova in the excreta after this treatment.

During treatment no alarming symptom which might be attributed to the drug was observed. The patients experienced dizziness which was not sufficient to prevent the satisfaction of certain necessities.

Now then, the dose of 10 drops for adults is insufficient for the expulsion of uncinaria unless the dose is repeated. For this reason under continuous treatment for three consecutive days the maximum therapeutic effect was obtained in minimum time, leaving for future investigation the administration of larger doses in harmony with the physiological resistance of the patients and other circumstantial elements which justify it.

Chenopodium oil extracted from *Chenopodium Ambrosioides* is the "pazote" or "apazote" so well known and used by the country people against ascarides and intestinal parasites. It has the advantage for them that they take it with confidence, a reason why it should be preferred to other anthelmintics, aside from its proven great efficacy.

Month.	Number of cases.	Month.	Number of cases.
July.....	3,163	February.....	2,829
August.....	5,575	March.....	3,719
September.....	5,881	April.....	2,947
October.....	4,325	May.....	7,511
November.....	2,814	June.....	3,397
December.....	1,545		
January.....	1,649	Total.....	45,355

SUMMARY.

Dispensaries in regular operation.....	66
Patients under treatment at the close of fiscal year 1917-18.....	10,113
New cases.....	45,355
Cases cured.....	21,589
Deaths.....	204
Abandoned treatment.....	6,715
Under treatment.....	26,960
Municipalities with more cases under treatment:	
Lares.....	3,357
Utusado and Jayuya.....	2,629
San Sebastian.....	1,841
Morovis.....	1,279
Maricao.....	1,206

The new cases of uncinariasis treated during the fiscal year are classified as follows:

Classification.	Number of cases.	Percent-age.
By race:		
White.....	32,932	72.61
Colored.....	12,423	27.39
Total.....	45,355	100.00
By sex:		
Male.....	23,993	52.90
Female.....	21,362	47.10
Total.....	45,355	100.00
By ages:		
From 1 to 9 years.....	5,549	12.24
From 10 to 19 years.....	17,680	38.98
From 20 to 29 years.....	13,498	29.76
From 30 to 39 years.....	6,740	14.86
From 40 to 59 years.....	1,888	4.16
Over 60 years.....		
Total.....	45,355	100.00

Table showing cases of *uncinariasis* treated in the different towns of the island during the fiscal year 1918-19.

Towns.	Under treatment fiscal year 1917-18.	New cases.	Cured.	Deaths.	Abandoned treatment.	Under treatment.
Adjuntas.....	406	420	266	.....	92	468
Aguada.....	.....	306	16	3	188	289
Aguadilla.....	.....	612	183	28	.....	263
Agua Buenas.....	81	667	703	.....	.....	45
Aibonito.....	222	972	808	.....	.....	386
Anasco.....	506	915	1,048	1	.....	373
Arecibo.....	576	1,311	1,008	1	186	662
Arroyo.....	57	410	378	1	.....	88
Barceloneta.....	.....	1,211	32	.....	219	1,000
Barraquitas.....	.....	723	537	.....	.....	186
Barros.....	.....	1,098	415	4	63	616
Bayamon.....	532	725	654	.....	570	33
Cabo Rojo.....	.....	277	69	.....	122	86
Caguas.....	11	851	674	2	91	95
Camuy.....	209	836	226	12	350	457
Carolina.....	.....	278	60	.....	6	212
Cavey.....	545	458	400	.....	5	568
Celba.....	.....	28	18	.....	10	10
Ciales.....	11	1,827	895	17	9	917
Cidra.....	.....	352	47	2	107	196
Coamo.....	.....	277	57	1	80	139
Comerio.....	150	563	44	.....	3	666
Coroza.....	149	783	325	4	236	371
Dorado.....	.....	392	28	.....	.....	167
Fajardo.....	.....	38	21	1	4	5
Guanica.....	.....	261	29	.....	142	90
Guayama.....	.....	1,030	262	.....	606	163
Guayanilla.....	.....	334	25	.....	6	303
Gurabo.....	.....	610	242	.....	7	361
Hatillo.....	.....	323	13	1	.....	309
Humacao.....	40	214	167	.....	82	5
Isabela.....	.....	734	267	3	111	353
Jayuya.....	.....	1,152	34	.....	.....	1,118
Juana Diaz.....	.....	388	101	2	164	121
Juncos.....	14	977	732	.....	147	112
Lares.....	2,115	1,525	283	.....	.....	3,357
Las Marias.....	181	563	100	.....	296	348
Loiza.....	.....	327	53	.....	.....	274
Manati.....	.....	112	21	.....	.....	91
Maricao.....	388	1,144	276	.....	50	1,206
Maunabo.....	.....	1,137	842	.....	.....	295
Mayaguez.....	350	1,494	808	1	499	536
Moca.....	.....	1,266	603	81	157	425
Morovis.....	904	784	390	19	.....	1,279
Naranjito.....	.....	887	233	.....	54	580
Patillas.....	274	691	339	.....	408	218
Ponce.....	198	540	352	.....	321	65
Quebradillas.....	.....	600	192	2	139	267
Rincon.....	.....	38	.....	.....	.....	38
Rio Grande.....	53	521	251	.....	.....	323
Rio Piedras.....	.....	4	.....	.....	.....	4
Sabana Grande.....	.....	387	177	.....	2	208
Salinas.....	71	517	410	.....	.....	178
San German.....	293	1,342	915	.....	270	450
San Lorenzo.....	142	674	451	9	238	118
San Sebastian.....	146	2,440	743	2	.....	1,841
Santa Isabel.....	.....	5	5	.....	.....	.....
Toa Alta.....	.....	414	281	.....	.....	133
Toa Baja.....	.....	362	133	5	.....	224
Utado.....	733	1,000	12	.....	10	1,711
Vega Alta.....	46	691	120	.....	139	478
Vega Baja.....	227	1,465	1,380	1	107	204
Vieques.....	.....	330	19	.....	285	26
Villalba.....	.....	447	103	.....	110	234
Yabucoa.....	205	552	676	1	2	78
Yauco.....	278	461	467	1	32	479
Total.....	10,115	45,399	21,589	204	6,715	26,990

NOTE.—At present 66 anemia dispensaries are in regular operation. A number of towns which are not shown in the above table are incorporated to other towns forming a part thereof, such as Catano, which forms part of the Bayamon zone; Luquille of that of Fajardo; Lajas of San German; Hormigueros of Mayaguez; Las Piedras of Humacao; Trujillo Alto of Rio Piedras, and Culebra of Vieques.

Utado is shown with 733 old cases and 1,000 new cases, only 12 cases cured, a circumstance which is explained by the fact that the anemia dispensary was in operation only for the last 45 days of the fiscal year 1917-18.

REPORT OF THE DIVISION OF TRANSMISSIBLE DISEASES AND STATISTICS, FISCAL YEAR 1918-19.

For multiple well-known reasons the sanitary defense of our territory during the fiscal year 1918-19 was carried to extremes and intensified. Maritime relations, commercial interchange, the exigencies and needs of the war, the advent of peace with the return of soldiers from the trenches and training camps, and above all, the simultaneous return of our emigrant laborers, many of them converted into carriers, were joint causes and origin of many transmissible diseases, some of which were cosmopolitan, while others were peculiar to our own regional pathology.

The department of health faced such sanitary crises with its own means of action, and with such extraordinary means as were furnished by the legislature of Porto Rico, which means it coordinated and managed so as to combat and control said diseases. For such purpose the department carried out technical laboratory examinations and investigations; the isolation, hospitalization and quarantine of patients; established dispensaries; distributed food and clothing, prophylactic vaccines; practiced serotherapy; made special inspections, disinfections, and analyses of waters; removed sanitary nuisances; carried out a campaign against flies and other insects, and finally a systematized and constant cleaning of towns, which once more corroborated the effects of the well-known saying: "Contagion of cleanliness exists just as does contagion of filth."

The department of health was sorely and difficultly tried, but, notwithstanding, it may without ostentation take pleasure in pointing out the satisfactory results achieved by perseverance, discretion, and prudence.

With a spontaneity worthy of the highest praise the learned medical class of Porto Rico complied with the precept contained in section 28 of the sanitation act in force, and with those which compose regulations No. 43, relative to the report of cases of transmissible diseases treated by them, or of which they had knowledge, whether suspicious or confirmed. They thus showed their love for the cause of public health as well as their high sense of duty, and cooperated efficiently in obtaining true and trustworthy statistics on morbidity, which statistics are an indispensable factor for opportune pharmacologic and sanitary treatment, and of greater importance still, for the establishment of scientific prophylaxis.

The study and analysis of the different nosologic species constituting the group of transmissibles, and of those reported to this division during the fiscal year 1918-19, are given below.

TYPHOID FEVER.

Among the infecto-contagious diseases, typhoid fever, next to influenza, acquired the greatest importance as regards its intensity which was caused by the concurrence of determined factors. The most significant of these factors were the lack of certain sanitation works, such as the cremation of garbage in San Juan and the deficiency of latrines throughout the island. These latrines had become great breeding places for flies which contaminate food, fruits, etc. It is pertinent to state that in said epidemic outbreaks the part taken by water has been generally null, because the construction of waterworks in most towns of the island has very notably improved the supply of potable water in Porto Rico.

During the fiscal year 339 reports of typhoid fever were received from the different towns of the island, of which 62 were from the city of San Juan where there exists at the time of closing this report three convalescent cases.

Attention was greatly attracted by the existence of 33 cases in the month of April, which figure showed that the city was under the influence of an epidemic outbreak of typhoid fever.

The certainty was reached by exclusion that the cause of typhoid fever originated perhaps by flies which had visited an ignored case of typhoid fever, or which came from latrines, or by some carrier or other analogous means.

The origin of the epidemic outbreak having been determined, the greatest cleanliness and the greatest precautions were required in fly-proof quarters and their sale being required under the same conditions, after having previously obtained a permit from the local health officer.

All cases reported were visited. Adequate isolation was ordered, and prophylactic measures for the protection of healthy persons living with the sick were taken, as well as precautions to insure which triple antityphoid vaccination was practiced in the majority of cases, and simple or lipid vaccination in the remainder.

The number of vaccinations made from April to the date of closing this report is as follows:

In the month of April.....	474
In the month of May.....	822
In the month of June.....	202
Total.....	1,538

Patients who could not be duly attended in their respective dwellings were hospitalized in the quarantine hospital. And to the efficiency of such action is due the fact that the disease was successfully combated in San Juan in a short time, the same having been limited to the smallest number of patients, in the following form: Positive cases, 62; cured, 58; deaths, 4.

Outside of the capital, Mayaguez, Carolina, Yauco, Barros, Corozal, Vega Baja, Vega Alta, San Sebastian, Ciales, Sabana Grande, Arecibo, Manati, Utuado, Guayama, Rio Piedras, Rio Grande, San German, and Ponce received the benefit of antityphoid vaccination.

Mortality from typhoid fever in the island during the fiscal year 1918-19 is figured at 102 deaths as against 182 the previous year.

Mortality from typhoid fever, fiscal year 1918-19.

Municipality.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Aguada.....						1							1
Aguadilla.....				2	1								3
Añasco.....											1		1
Arecibo.....								1					1
Barros.....	4	3	5	1									13
Bavamon.....		1	1										3
Cabo Rojo.....							2		2	2	1		7
Ciales.....						2			1				3
Corozal.....				1									1
Dorado.....								1					1
Guaynabo.....		1		1						1			3
Guánica.....	1												1
Guayama.....					1								1
Guayanilla.....		2	3	1	1			1	1				8
Isabela.....												1	2
Juana Díaz.....				1				1					2
Lares.....			1										1
Las Marias.....	1		1										2
Lotia.....									1				1
Mayaguez.....		1		3				1	2				5
Ponce.....	3	2								1			6
Rio Piedras.....			1	1			1						3
Sabana Grande.....	2												2
San German.....		1	1										2
San Juan.....	2			2						2	3		9
San Sebastian.....												1	1
Santa Isabel.....		1			1	1							3
Trujillo Alto.....		1											1
Utuado.....	1											1	2
Vega Baja.....				1		1					1		3
Vieques.....										1	1		2
Yauco.....	1		1			2					1	1	6
Total.....	15	13	14	15	3	7	3	5	7	8	8	4	102

Deaths from typhoid fever in the island during the years 1913 to 1919.

	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Number of deaths.....	130	121	94	171	182	102
Rate per thousand of population.....	0.56	0.10	0.10	0.08	0.15	0.08
Percentage of mortality.....	60	51	35	40	53	25

Deaths from typhoid fever, by months, in the city of San Juan during the years 1913 to 1919.

	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
Estimated population.....	54,776	56,291	57,806	59,211	60,876	62,358
July.....	1	1	3	1	4	2
August.....			1	3	3	
September.....				2	2	
October.....	3	4				2
November.....		3				
December.....					1	1
January.....						
February.....		1		1	2	
March.....	3	2	2	1	2	
April.....		1	3	4	8	2
May.....	2		1	3		1
June.....	3		2	4		1
Total.....	12	12	12	19	23	9

SMALLPOX.

The health authorities made a supreme effort in the eradication of this disease, the health inspectors of the respective localities having practiced a constant and systematic antivarior vaccination. Said inspectors were aided by four special officers at large, in charge of vaccination in the country districts, especially in rural schools. Such action bore successful fruit, as is proven by the fact that only one case was reported. This case was in the town of Gurabo in an unvaccinated person.

Table showing vaccination work performed in the different towns of the island during the fiscal year 1918-19.

Towns.	Number of vaccinations.	Towns.	Number of vaccinations.
Adjuntas.....	2,867	Juncos.....	2,344
Aguada.....	2,057	Laros.....	2,668
Aguadilla.....	940	Las Marías.....	2,634
Agua Buenas.....	1,854	Las Piedras.....	200
Alhómito.....	831	Loíza.....	500
Añasco.....	1,855	Manatí.....	6,754
Arecibo.....	8,502	Maricao.....	1,724
Arroyo.....	3,129	Maunabo.....	2,490
Barceloneta.....	513	Mayaguez.....	13,180
Barranquitas.....	576	Moca.....	2,614
Barros.....	2,094	Naguabo.....	200
Bayamon.....	2,227	Naranjito.....	792
Cabo Rojo.....	1,994	Patillas.....	1,255
Caguas.....	17,452	Ponce.....	13,489
Camuy.....	4,045	Quebradillas.....	473
Carolina.....	1,945	Rincon.....	1,751
Cataño.....	738	Rio Grande.....	2,850
Ceiba.....	1,232	Rio Piedras.....	76
Ciales.....	2,490	Sabana Grande.....	3,643
Cidra.....	1,226	Salinas.....	3,749
Coamo.....	1,840	San German.....	1,021
Comerio.....	3,333	San Juan.....	1,862
Corozal.....	903	San Lorenzo.....	5,749
Dorado.....	1,537	San Sebastián.....	2,780
Fajardo.....	4,897	Santa Isabel.....	2,400
Guanica.....	1,570	Tos Alta.....	1,553
Guayama.....	5,630	Tos Baja.....	2,003
Guayanilla.....	1,171	Utusado.....	4,305
Guaynabo.....	13	Vega Alta.....	1,506
Gurabo.....	985	Vega Baja.....	269
Hatillo.....	878	Vieques.....	923
Humacao.....	1,950	Yabucoa.....	2,154
Isabela.....	2,286	Yauco.....	1,783
Jayuya.....	786		
Juana Díaz.....	1,308	Total.....	143,405

SCARLET FEVER.

Two suspicious cases in the town of Manatí were carefully investigated, one in the month of May and the other in June. The first case was investigated by the commissioner of health himself, Dr. Ruiz Soler, and turned out to be a case of rubeola, no sign of pharyngitis having been observed in the beginning, course, or convalescence of the disease.

The other case was investigated by the medical inspector of the northern district, Dr. De la Rosa. This was the case of a girl suffering from varicella, without pharyngitis or infection in the cervical region, who simultaneously had an attack of rubeola or measles, which disappeared in 48 hours.

On June 17 Dr. Izquierdo, who resides and practices in Yauco, reported to the medical inspector of the southern district two suspicious cases of scarlet fever. Upon examination by said inspector they were found to be positive. One of the cases was that of a girl of 9 years and the other of a girl of 5, both belonging to families of means. Both cases were duly isolated and fully subjected to the sanitary treatment of the disease. On closing this report no new cases have been recorded in Yauco.

The case of the 9-year-old girl seems to have some connection with a Ponce case of mild form attended by Dr. Ferrán, but no connection with another case in the same city in which death occurred from acute septicemia with scarlatiniform rash. Another case of very mild form was also recorded in Ponce. Sanitary action in all these cases was scrupulous and timely.

ANTHRAX.

During the period from July, 1918, to June 30, 1919, the veterinary inspector for the northern district, Dr. Juan Varas Catalá, has made many investigations of anthrax in bovine cattle, principally in Fajardo, Ceiba, and Naguabo, the laboratory results having been positive in post mortem as well as in hematological examinations, and in examinations of the organs of affected animals. Vaccination of the cattle was practiced and the epizooty ended.

In Naguabo a boy who had eaten the meat of an ox that had died of anthrax contracted the disease.

The veterinary inspector of the southern district, Dr. A. C. Pou, reported that in Mayaguez a man who had skinned an animal which died of anthrax had suffered from malignant pustule and that the horse which carried the hide of said animal died of the disease.

DIPHTHERIA.

The division received 75 card-reports of this disease, as against 128 for the previous fiscal year; that is, 53 cases less, which fact proves that sanitary action was timely, and plainly shows the excellent results obtained by employing Schick's test to determine individual susceptibility, as well as the immunity obtained from the use of the antitoxin diphtheric toxin. The department furnished 683,000 units of anti-diphtheric serum at a cost of \$330.19.

Cases of diphtheria reported during the period from July, 1918, to May, 1919.

Month.	Town.	Number of cases.	Month.	Town.	Number of cases.
July.....	Arecibo.....	1	January.....	Bayamon.....	2
Do.....	Comerio.....	1	Do.....	Manatí.....	1
Do.....	Guayama.....	2	Do.....	Yauco.....	1
Do.....	Yares.....	1	February.....	Bayamon.....	1
Do.....	Naguabo.....	3	Do.....	Ceiba.....	1
Do.....	San Juan.....	1	Do.....	Patillas.....	1
August.....	Coamo.....	1	Do.....	San Juan.....	5
Do.....	Fajardo.....	1	Do.....	Toa Baja.....	1
Do.....	Guanica.....	1	Do.....	Yauco.....	1
Do.....	Guayama.....	1	March.....	Guayama.....	3
Do.....	Juana Diaz.....	1	Do.....	Humacao.....	1
Do.....	Mayaguez.....	1	Do.....	San Juan.....	4
Do.....	Rincon.....	2	Do.....	Yabucoa.....	1
Do.....	Sabana Grande.....	1	April.....	Humacao.....	1
Do.....	San Juan.....	5	Do.....	San Juan.....	2
Do.....	Toa Alta.....	3	Do.....	Guayama.....	2
Do.....	Yauco.....	1	Do.....	Mayaguez.....	1
November.....	Hatillo.....	1	Do.....	Yauco.....	1
Do.....	San Juan.....	3	Do.....	Manatí.....	1
Do.....	Yauco.....	2	May.....	San Juan.....	1
December.....	Aguas Buenas.....	1			
Do.....	Humacao.....	4		Total.....	73
Do.....	San Juan.....	2			

Summary by towns.

San Juan.....	23	Coamo.....	1
Guayama.....	6	Fajardo.....	1
Humacao.....	6	Juana Diaz.....	1
Yauco.....	5	Lares.....	1
Manati.....	3	Sabana Grande.....	1
Naguabo.....	3	Hatillo.....	1
Toa Alta.....	3	Aguas Buenas.....	1
Bayamon.....	3	Cella.....	1
Mayaguez.....	2	Patillas.....	1
Rincon.....	2	Toa Baja.....	1
Arecibo.....	1		
Comerio.....	1	Total.....	73

DENGUE.

During the second fortnight of the month of June, 1918, dengue "the pious," as it is called in Spain, because of its mildness, reigned in the city of San Juan. This disease coincided with the appearance of the first outbreak of influenza, imported on the Spanish steamship *Patricio de Sotrustegui*, and confused with the former because of the great analogy between them. Such analogy determines certain authors to assert that they are one disease and that the particular symptoms of dengue are due simply to the latitude where they are observed. A similar occurrence took place at the end of 1889 and in the beginning of 1890, when gripe appeared in regions where dengue existed, which dengue was identical with the gripe of temperate countries. Hence, dengue is different from gripe, as stated elsewhere in this report, is ordinarily accompanied by catarrh of the respiratory passages, which does not appear in dengue, in which there exists, on the other hand, an eruption which is rare in gripe.

About 1,000 cases were reported in San Juan, and from this city the disease spread to other towns of the island. From these towns 77 cases were reported from Juncos, 42 from Rio Piedras, 23 from Fajardo, 23 from Maunabo, 17 from Vega Baja, and 15 from Caguas.

BERIBERI.

On December 6, 1918, the insular board of health was advised of the appearance at the base hospital, in soldiers from Camp Las Casas, of a disease resembling beriberi. This circumstance caused the board to address Lieut. Col. Lippitt, chief surgeon of the brigade at said camp, in order to avoid unfounded alarm among the civil population, or in order to fix and remove the causes giving origin to the disease should it be real and positive.

Said officer replied that the cases in question had been diagnosed as polyneuritis, and that they were under study and investigation by the camp medical corps in order to make an exact and categorical diagnosis.

At the same time the board addressed the commissioner of health in order to take such action as was necessary to prevent the introduction into the island of rice of poor quality, deficient in vitamin as regards the proportion recommended by bromatological hygiene, and as an immediate measure to prohibit absolutely the sale of moldy rice.

The laboratory investigations were intrusted to the chiefs of the biological and chemical laboratories of the department of health, whose respective reports are transcribed below.

Dr. Francisco J. Hernandez, of the biological laboratory, says that he examined 38 patients who presented symptoms of polyneuritis localized in the legs, which cases, because of the atrophic changes in determined group of muscles of the legs, seemed suspicious cases of beriberi of the paralytic type.

The clinical history and rapid improvement on a change of locality and on submission to adequate nourishment, strengthen the presumption.

The etiology of beriberi is exceedingly obscure and complex, notwithstanding the fact that the bacterian or parasitic origin of the disease is firmly maintained by many authors. They all admit that certain foodstuffs are the carriers of the direct cause of the disease, and the fact that this morbid incidence was observed in only one company of soldiers, which received its rations from different sources of supply, is considered of great importance in determining whether such rations were issued in a state of decomposition or whether the tinned conserves contained some substance which kept them in such condition.

The director of the chemical laboratory stated that the fact that an excessive quantity of tinned foods was employed in feeding the troops gives cause to suspect neuritis due to metallic intoxication, as happened from the use of bay rum as an antiseptic drink, since such bay rum contained sulphate of zinc.

Anhydrous phosphoric acid in rice was also investigated because of its close relation to the contents of vitamin, known as it is that rice containing all the vitamins necessary to make it hygienic and of adequate nutritive power should not contain less than 0.4 per cent of said phosphoric acid. In making these observations the chemical laboratory does not overlook that deficiency in vitamins in rice may be compensated by their presence in other foods consumed. This circumstance is very considerable, because even vitaminous rice constitutes a peril when such cereal is the essential, if not the exclusive, basis of the nourishment of a people or of a determined zone of the earth, as happens in the Orient.

For the sake of information the result of the determination of phosphoric acid in different samples of rice is transcribed:

P 205 in samples of rice.

Origin.	Percentage
Director's home—Type "Honduras".....	0.316
W. M. Garic & Co., San Juan, P. R.....	.265
Camp Las Casas—Type "Canilla".....	.286
W. M. Garic & Co., San Juan, P. R.....	.207

As to the different causes of neuritis in the cases referred to, they may be referred to five reasons, to wit:

- (1) Polyneuritis caused by polished rice.
- (2) Polyneuritis caused by polished rice altered by fungus.
- (3) Polyneuritis caused by intoxication by the ingestion of metals with the malachite green in denatured alcohol drunk with grape juice by many soldiers during their visits to town.
- (4) Polyneuritis caused by intoxication by metals with the soluble contents of the profusion of tinned foods in the aforesaid diet.
- (5) Polyneuritis caused by profusion of vitaminous foods in preserved meat and vegetable diets.

The first three theories fell under their own weight at the very beginning because of a multitude of reasons which have turned up during the inquiries made. Differentiation and proof of the last two points, the fourth and the fifth, that is, of the theory of toxic origin by metals or of the lack of vitamins, are therefore pending.

To dilucidate these two theories, steps were taken with the medical director of the base hospital and with the surgeon in charge of Camp Las Casas so as to obtain specimens of urine from the sick in order to study the foods employed at said camp, respectively. The material requested of the base hospital was duly furnished. It was impossible to obtain the foodstuffs from the camp. Being short of one of the principal parts of this investigation because the aforesaid material for examination was not forthcoming, the chemical laboratory could not reach a final conclusion in the cases studied from the exclusive standpoint of chronic intoxication by poisonous metals.

At any rate, the toxic origin and the lack of vitamins in some foods are sufficient to explain the morbid incidence, and this has been shown during the latter part of the course of the disease, the majority of the patients having been cured in short order.

When nine cases were transferred to the post hospital of San Juan from the United States Army base hospital, San Juan, three cured of the paralysis and neuritis, and the others, if not wholly cured, were discharged under pension.

Finally, on January 7, 1918, Dr. Rodriguez Cancio, who practices in San Sebastian, reported a suspicious case of beriberi in the "Arenales Alto" district of said jurisdiction, in the person of Genare Valentin, 26 years of age, who had been recruited in the Army. The case was investigated by Dr. Martin O. de la Rosa, medical inspector of the northern district, who diagnosed it as a postinfluenza transitory myelitis. The case was transferred to the quarantine hospital at San Juan where it was duly studied and treated, said diagnosis having been confirmed and the patient returned to his home greatly improved.

On January 9 another similar suspicious case of beriberi was recorded in the district of Bejuco, Isabela, in the person of Ramón de Jesús. As in the foregoing case, this was a question of postinfluenza medullar disorders associated with an old avariosis confirmed by the Wasserman reaction.

According to reports received this individual continues in the same condition.

EPIDEMIC DYSENTERY.

In regard to this transmissible disease it must be said that the records of the division fail to show any reports of dysentery in the two most known forms of the disease, that is, amebic dysentery, which is quite frequent in the island, and bacillary dysentery, which is less frequent, and is also called epidemic dysentery (Shiga).

On the other hand there were recorded 118 deaths cases diagnosed as dysentery, but unspecified.

This deficiency can not be explained unless the disease is not thought to be of compulsory report, although it appears in the table of reportable diseases. As to the simple diagnosis of dysentery, it is easier explained since the term dysentery includes besides the different forms of the disease, other similar diseases of much varied pathological anatomy and distinct course of the disease.

The 118 deaths referred to are distributed as follows:

Deaths from dysentery during the fiscal year 1918-19.

Cabo Rojo.....	4	Rincon.....	1
Coamo.....	3	San Lorenzo.....	1
Guayama.....	4	Utua.....	1
Hatillo.....	5	Yauco.....	3
Lares.....	1	Guanica.....	2
Las Marias.....	1	Villalba.....	6
Loiza.....	2	Albionito.....	1
Manati.....	1	Ba amon.....	4
Ponce.....	7	Patillas.....	4
San Juan.....	16	Yabucoa.....	4
San Sebastian.....	1	Humacao.....	1
Yebacaja.....	3	Santa Isabel.....	1
Adjuntas.....	2	Vega Alta.....	2
Arecibo.....	5	Ciales.....	1
Gurabo.....	1	Toa Alta.....	2
Jayuya.....	8	Guaynabo.....	1
Loquillo.....	1	Barceloneta.....	1
Mayaguez.....	3	Las Piedras.....	2
Penuelas.....	1		
Aradua.....	5	Total.....	118
Carolina.....	6		

WHOOPIING COUGH.

This disease is endemic in Porto Rico. From time to time it recurs epidemically, thus corroborating the well-known aphorism that the etiology of the disease is reduced to one single idea, "contagion."

Sixty-eight cases were reported, Vega Baja showing the greatest number, 22. Mayaguez follows with 8; Guayama, 5; Arecibo, 5; Utua, 3; and other towns with 1 each.

PELLAGRA.

But two cases of this disease were reported during the fiscal year, one in San Juan in September, 1918 (psychosis for pellagra), and the other a typical case perfectly defined by its somatic characteristics. The latter case was reported from Fajardo in May, 1919.

EPIDEMIC PAROTIDITIS.

The return of the laborers who went to the United States, where they worked in different factories established because of war necessity, was accompanied by the importation of this disease. Fortunately no deaths have been recorded.

The number of cases reported is 522.

FILARIASIS.

Five deaths from this disease were recorded in the island, one in Mayaguez, one in Guayama, one in Carolina, and two in Cabo Rojo.

Fourteen cases were reported as follows: San Juan, 13; Salinas, 1. Without previous analysis even the most casual observer will note that said statistical figures for morbidity and mortality are very inexact. Any clinic practicing in Porto Rico, no matter how limited his practice may be, attends at least three filariasis a year, and this simple circumstance is the greatest evidence of the lack of proper report to the division of transmissible diseases.

Moreover, known as are the endemic zones, the clinical diagnosis is generally very easy, as happens in San Juan, the district of Puerta de Tierra, and among the convicts in the penitentiary who cut wood in the mangrove swamps, the greatest number of reports being from San Juan.

In his "Notes on Filariasis," read to the Academy of Medicine of Porto Rico, Dr. Martinez Alvarez states that in the mind of not a few colleagues the idea of malaria adheres with preference, this morbid process being closely allied with filariasis in all endemic zones, and hence the former is responsible for morbidity and mortality from the latter when the fact is the opposite, filariasis reigning over malaria in certain zones such as San Juan. Notwithstanding this fact, 101 cases of paludism and 8 deaths from the same disease were reported. Finally, filariasis simulates and often is the immediate or mediate cause of many processes which cause death, and even sudden death, which do not appear in the filariasis statistics.

INFANTILE TETANUS.

During the fiscal year 600 (exact figure) children have died of infantile tetanus. These deaths seriously affect human social capital since they constitute relative values in general mortality.

During the fiscal year 1917-18, there were 580 deaths. This progressive increase from year to year could not but influence the members of the insular board of health, who determined to draft regulations on the most effective means to reduce the incidence of infantile mortality, which regulations were entitled: "Regulations for the prevention of infantile mortality from tetanus and of blindness from ophthalmia neonatorum."

The commissioner of health requested the legislature to make a reasonable appropriation (\$5,000) for the purchase of preventive kits for tetanus and ophthalmia neonatorum, but it was not passed.

GLANDERS.

From July 1, 1918, to June 30, 1919, but five horses suffering from glanders were killed after diagnosis by the biological laboratory of the department.

It should be noted that equine glanders is disappearing in the island as a logical result of the generalization of the use of automobiles, which eliminate the horse as a factor in hauling and traveling, and of the very active campaign carried on with positive results for the last eight years by the veterinary inspectors of the department of health.

FAVUS.

Six cases of this parasitic dermatosis were reported to this division. Five occurred in the boys' charity school in Santurce and one in Arecibo, which was attended by Dr. Francisco Susoni.

Of the six cases four belonged to the variety *tinea tonsurans* and were as follows:

Case 1.—B. M., *tinea tonsurans*: Duration, from April 22 to October 13, 1918.

Case 2.—A. R. G., *tinea tonsurans*: From May 16 to April, 1918.

Case 3.—G. D., *tinea tonsurans*: From December 4, 1918, to March 30, 1919.

Case 4.—*Tinea tonsurans*, reported by Dr. Francisco Susoni, is the most interesting. The disease lasted three years. It invaded the entire scalp, causing total loss of hair and of the eyebrows and eyelashes, and spread to the entire body, not leaving a single hair on the same, as happened with previous cases submitted to clinic treatment.

The other two cases to make up the six were:

Case 5.—*Tinea pavosa*: Under treatment.

Case 6.—*Tinea pavosa*: Under treatment.

ACUTE POLIOMYELITIS.

Dr. Aubray reported a suspicious case in Rio Grande. Upon scrupulous investigation by the medical inspector for the northern district and by the department's pathologist it was found to be a case of malaric poliomyelitis.

LEPROSY.

The problem of leprosy in Porto Rico, notwithstanding its simplicity (not more than 50 lepers in a population of 1,300,000) obtained extraordinary notoriety and greatly attracted the attention of friends and strangers. This problem was never looked at indifferently by our legislators, who have always heeded the trend of public opinion and who passed a bill at the last session of the legislature for the transfer and establishment of the leper colony in a more adequate place. This act did not have the force of law for reasons which it is not necessary to state here. They have just passed another bill at the present session, which will correct errors and amend abnormal and anti-scientific conditions demonstrated by the existence of the aforesaid colony so capriciously established on the island of Cabras.

The admission and discharge of patients at the institution during the fiscal year 1918-19 was as follows:

By sexes:	
Male.....	27
Female.....	12
Total.....	39
By races:	
White.....	20
Colored.....	19
Total.....	39
By ages:	
From 1 to 15 years.....	2
From 15 to 25 years.....	15
From 25 to 30 years.....	4
From 30 to 40 years.....	5
From 40 to 50 years.....	5
From 50 to 60 years.....	6
From 60 to 75 years.....	2
Total.....	39
By towns:	
Aguadilla.....	8
Añasco.....	1
Bayamon.....	1
Cosmo.....	1
Guayama.....	1
Mayaguez.....	1
Naguabo.....	4
Ponce.....	4
Patillas.....	6
Rio Grande.....	1
San Juan.....	12
Trujillo Alto.....	1
Vega Baja.....	3
Total.....	39

COLIBACILLOSIS.

The bacterium *coli commune* or colibacillosis, so called by Chantemesse and Vidal for the sake of shortness, is the origin of coli-infections or endogenic or exogenic colibacillosis.

The physiologic parasitism, that is, the harmonic life of the human organism and the microbe, is at times interrupted by an abnormal virulence due to physico-chemical modifications, or when the same introduces itself into the organism after having experienced outside of it a morbid development, or when the epithelial barrier lining the cavities inhabited by said germs is destroyed. Numerous affections then occur, such as chronic amygdalitis, simple acute or chronic diarrhea, cholera nostras, infantile cholera and dysentery nostras, appendicitis, peritonitis, and upon migration by the vascular way, adhesive pyelophlebitis of the lung, and even a veritable pyemia.

The colibacillus also produces angiocholitis and coleocystitis, isolated or associated, and becomes an important factor in bilious lithiasis, and passing through the bile ducts enters the blood and causes colibacilluria.

But these morbid contingencies do not constitute nor integrate the nosological species denominated colibacillosis, that is the colibacillar bacteriemia studied by Comby, De Haan, and other clinics who assign thereto the proper epidemiologic value, and establish an aggregate of symptoms permitting a direct diagnosis of the disease and the differential from streptococcal infections, malaria, pneumonia, exanthematic eruptions, and finally, typhoid fever, to which it is most similar.

This short summary in no way involves the idea of expressing new ideas, but to make known the fact that colibacillosis is quite common, sometimes reaching epidemic characteristics. Notwithstanding, it is rarely reported by physicians in attendance on cases of the disease, as shown by the fact that in the fiscal year under discussion but two cases of colibacillosis have been recorded, one reported from Arecibo by Dr. Rivera Aulet, local health officer, and the other by Dr. Paniagua in the boys' charity school, Santurce, of which he is the visiting physician.

MEASLES.

The epidemic of measles of 1917-18, though well controlled, has continued to give rise to more or less intense outbreaks in towns thought to be immune.

Ninety-one deaths occurred from this disease.

EPIDEMIC CEREBROSPINAL MENINGITIS OR CEREBROSPINAL FEVER.

During the first days of May and the first 10 days of June an outbreak of this disease was registered in San Juan in two different places. From the time the first case was reported Dr. Dobal, whose diagnosis was confirmed hematologically (presence of Weichselbaum's diplococcus) by Dr. Gutierrez Igaravidez of the Institute of Tropical Medicine and Hygiene, numerous opportunities offered of investigating the meningococcus by examination of nasopharyngeal exudate, hemanalysis, hemocultures, and bacterioscopy of the cephalorachidian liquid. A glance at the annual report of the biological laboratory will give an idea of these investigations.

Case 1.—Girl T. R., 43 Cristo Street, reported by Dr. Dobal. Investigated and diagnosed as above said by Dr. Gutierrez Igaravidez. Died.

Case 2.—J. C., mother of said child. As a suspicious carrier she was isolated in the San Juan Quarantine Hospital with her husband and two children. The nasopharyngeal exudates having given a negative reaction, they returned to their homes. Three days later she presented the clinic syndrome of epidemic cerebrospinal meningitis. Dr. Carballeira reported the case to the department of health. On examination some specimens of blood revealed to Dr. Gutierrez Igaravidez the presence of intercellular diplococcus. The patient was transferred to the quarantine hospital. One hour and a half after death, Dr. Giuliani, the department's pathologist, made the lumbar puncture, and in the liquid cultures were made in adequate cultural media.

Case 3.—M. R., Labra Street, Santurce. Adult. Reported by Dr. Castro, with a syndrome analogous to that of the previous case. The samples of blood taken by Dr. Gutierrez Igaravidez showed the presence of diplococcus in the polynuclear leucocytes. The patient was transferred to the quarantine hospital where Dr. Hernandez, director of the bacteriological laboratory, made the lumbar puncture. Cultures were made which produced pure cultures of meningococcus. Died.

Besides these three confirmed cases many others which were not positive were reported. Reports to the same effect were also received from the island, as well as specimens of blood and samples of cephalorachidian liquid which gave negative results.

The following measures to control the disease were adopted:

- (1) Isolation in the quarantine hospital of suspicious and confirmed cases. Rigorous disinfection of dwellings occupied by them.
 - (2) Observation and surveillance of persons living in the infested and neighboring houses.
 - (3) Examination of exudate and of nasopharyngeal secretion of residents of the zone where cases existed. The existence of carriers could not be established by said examination.
 - (4) The relatives and neighbors of the person affected were vaccinated with meningococcic vaccine.
 - (5) In one case, though unfortunately without success, the opportunity to apply polyvalent antimeningococcic serum was offered.
- By the adoption of these measures, and with the very valuable aid of the medical profession it was possible to control this serious infection.

List of towns which have sent samples to the bacteriological laboratory for analyses to determine transmissible disease cases during the fiscal year 1918-19.

Towns.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Adjuntas.....			1										1
Aguaadilla.....	4	3	7	1	8	3	1		6		1	1	38
Agua Buenas.....	2	2				1							5
Albionito.....	3	2	1	2	1						9	3	21
Añasco.....	3	1	1			2					2		9
Arecibo.....	9	4	137	186	110	51	1	4	11	18	15	26	572
Arroyo.....	1	1		1	3	2	1	3	5		5	2	27
Barceloneta.....	17	15	6	19	73	1		11	2	2		1	97
Barranquitas.....	1				1								2
Bayamon.....	8	4	1		4	2	12	14	4	1	3	4	57
Cabo Rojo.....			1								10	1	12
Caguas.....	1	6	3	7	6	12	2	2	14	4	11	20	88
Camuy.....	2			1					1		1	4	9
Carolina.....	5		1		2	3	1				2	5	19
Cataño.....	2	3	1	2	2		1	2	4	4		2	25
Cayey.....	2					1					4		7
Ciales.....	3		1	1	1			1	6		1		14
Coamo.....						1		1	6		1		9
Comerio.....	6	10	26	21	9	4		1	7	2	2	16	104
Corozal.....	4	4	2	10	2	2	1	1		1	2	4	33
Dorado.....	2	1		1	3				4	1	1		13
Fajardo.....	1	6	6	8	3	4	2	1	3	1	7	5	47
Guanica.....	2	4	1	3		4		1	11	19	22	25	92
Guayama.....	10	23	9	8	1			4	36	9	42	8	200
Guayanilla.....	2	2	1		1	3						1	10
Gurabo.....				2	1	1					3	1	8
Hatillo.....											5	5	11
Humacao.....			1		1			1		2	2	1	9
Isabela.....	1	4			2		1	2	2		5	2	19
Juana Diaz.....	2			13		2			1		1		19
Juncos.....	1									2			3
Lares.....	1	3											4
Las Marias.....													2
Lola.....					1			1	1		1		3
Manati.....		3	7	2	8	1	3	4	1	2	2	1	35
Mayaguez.....	6	16	19	31	16	8	2	12	7	2	30	13	162
Morovis.....	1												1
Naguabo.....	2		1								1		4
Naranjito.....		1	2									1	4
Patillas.....		1	1	2	11				1				16
Pedraza.....	2								2			2	6
Ponce.....	24	37	36	31	22	22	19	64	67	14	67	47	450
Quebradillas.....		3	2	1	1	1							8
Rincon.....	1												1
Rio Grande.....	1	3	2		5	5	1	1				1	19
Rio Piedras.....	8		2	1		1	5	6	1		2	10	36
Sabana Grande.....	14	7	11	3	2				2		1	1	41
Salinas.....	10	29	29	27	14		77	110	141	36	340	156	909
San German.....	2		3	1	1	1		1	3		2	2	16
San Juan.....	99	130	110	208	130	126	66	329	119	131	183	209	1,840
San Lorenzo.....			2		3								5
San Sebastian.....		3	1				2		15	20	35	2	78
Ton Alta.....				2					1				3
Ton Baja.....				1					1			1	3
Utando.....	3	4	3	3	1			2	2		9	4	31
Vega Alta.....								1			2	1	4
Vega Baja.....	3	6	10	4	4	1	1	9	3	2	10	14	67
Vieques.....		2			1	1	2		2	1	6	1	16
Yabucoa.....						3		2		1	1		7
Yasco.....	2	2	2	3	5	1	1	1	8	1	5	6	37

Table showing the total number and kinds of analyses made in the biological laboratory during the fiscal year ended June 30, 1919.

	July.			August.			September.			October.		
	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.
Hematological examination:												
Human blood—												
Malaria.....		69	69	61	61	122	78	78	156	95	95	190
Malaria plasmodium vivax.....	11		11	24	24	35	23	23	36	31	31	67
Malaria Plasmodium falciparum.....	10		10	11	11	21	16	16	22	22	22	44
Malaria plasmodium malaria.....				1	1	2						
Puncture of spleen for malaria.....												
Filaria.....	1	3	4	1	5	6	2	4	6		4	4
Differential count.....			3						2			
Leucocytic count.....						4						3
Serum diagnosis:												
Typhoid fever (Widal).....	20	43	63	10	21	31	1	11	12	1	17	18
Typhoid fever (incomplete) agglutination.....			17			7			1			8
Syphilis (Wassermann).....	15	28	43	10	29	39	79	30	109	57	34	91
Blood of domestic animals: Anthrax serum reaction: Glanders.....	3		3		1	1	1	5	6			
Experimental inoculation: Rabies to guinea pigs.....									2			
Examination of tissues for negri bodies: Dogs.....								1	1			
Urine: Chemical and microscopical examination.....			37			56			44			65
Chemical and microscopical examination: Human milk.....												1
Transudates, exudates, and secretions:												
Sputum (tuberculosis).....	54	48	102	67	63	130	34	56	90	46	40	86
Other bacterias.....												
Phiffer (bacillus).....												
Pharyngeal exudate (diphtheria).....	4	3	7	14	28	42	22	57	79	20	31	51
Pharyngeal exudate (pseudo diphtheria).....											4	4
Leprosy.....	1	1	2				1		1	1	2	3
Uretral exudate (gonococcus and other bodies).....	1	2	3	3	3	6	12	41	53	35	176	211
Investigation for meningococcus:												
Cerebrospinal fluid.....												
Perispherical blood.....												
Nasal-pharyngeal exudate.....												
Puncture of the heart.....												
Lumbar puncture.....												
Hemo-culture.....												
Bacteriological examination:												
Water.....			7			5			5			3
Cow milk.....												
Feces, intestinal parasites:												
Amebas.....												
Trichocephalus.....	8		8	10		10	6		6	9		9
Uncinaria and trichocephalus.....				3		3	3		3	2		2
Ascarides.....				1		1	1		1	2		2
Ascarides and trichocephalus.....	2		2	1		1	1		1	1		1
Ascarides and bilharzia.....												
Anguillulas, ascarides, and trichocephalus.....	1		1									
Uncinaria-terchomoma and trichocephalus.....	1		1									
Bilharzia, trichocephalus, and anguillula.....	1		1									
Bilharzia, uncinaria, and trichocephalus.....				1		1						
Cysticercus.....												
Uncinaria.....	3	8	11	2	17	19	7	11	18	4	18	22
Samples returned.....									11			43
Total.....	136	206	406	159	230	461	209	494	568	231	421	773

Table showing the total number and kinds of analyses made in the biological laboratory during the fiscal year ended June 30, 1919—Continued.

	November.			December.			January.		
	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.
Hematological examination:									
Human blood—									
Malaria.....		93	93		58	58		85	85
Malaria plasmodium vivax.....	23		23	13		13	66		66
Malaria plasmodium falciparum.....	39		39	12		12	38		38
Malaria plasmodium malaria.....									
Puncture of spleen for malaria.....									
Filaria.....		5	5	1	2	3			
Differential count.....									
I. eucytic count.....			3			3			2
Serum diagnosis:									
Typhoid fever (Widal).....	1	21	22	2	21	23	2	10	12
Typhoid fever (incomplete) agglutination.....			2			4			2
Syphilis (Wassermann).....	7	16	23	14	11	25	10	13	23
Blood of domestic animals: Anthrax.....									
Serum reaction: Glanders.....									
Experimental inoculation: Rabies to guinea pigs.....									
Examination of tissues for negri bodies: Dogs.....									
Urine: Chemical and microscopical examination.....			71			70			26
Chemical and microscopical examination: Human milk.....									
Transudates, exudates, and secretions:									
Sputum (tuberculosis).....	35	47	82	37	33	70	29	41	70
Other bacterias.....									
Phiffer (bacillus).....	3		3	1		1			
Pharyngeal exudate (diphtheria).....	3	15	18		9	9	7	5	12
Pharyngeal exudate (pseudo diphtheria).....							6		6
Leprosy.....		1	1				1		1
Uretral exudate (gonococcus and other bodies).....	26	79	105	14	38	52	4	4	8
Investigation for meningococcus:									
Cerebrospinal fluid.....								2	2
Perispherical blood.....									
Nasal-pharyngeal exudate.....									
Puncture of the heart.....									
Lumbar puncture.....									
Hemoculture.....									
Bacteriological examination:									
Water.....			5						
Cow milk.....									
Feces, intestinal parasites:									
Amoebas.....									
Trichocephalus.....	15		15	9		9			
Uncinaria and trichocephalus.....	4		4	1		1		9	10
Ascarides.....	2		2	2		3	2		2
Ascarides and trichocephalus.....	2		2				1		1
Ascarides and bilharzia.....	1		1						
Anguillulae, ascarides, and trichocephalus.....									
Uncinaria-cerchomona and trichocephalus.....									
Bilharzia, trichocephalus and anguillula.....									
Bilharzia, uncinaria and trichocephalus.....									
Cysticercus.....	1		1						
Uncinaria.....	1	24	25	2	15	17	4		4
Samples returned.....			12			12			14
Total.....	163	301	567	109	187	385	165	167	376

Table showing the total number and kinds of analysis made in the biological laboratory during the fiscal year ended June 30, 1919—Continued.

	February.			March.			April.		
	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.
Hematological examination:									
Human blood—									
Malaria.....		174	174		302	302		747	747
Malaria plasmodium vivax.....	46		46	38		38	52		52
Malaria plasmodium falciparum.....	40		40	32		32	40		40
Malaria plasmodium malaria.....									
Puncture of spleen for malaria.....									
Filaria.....	4		4	3	2	5		2	2
Differential count.....			3			4			3
Leucocytic count.....			3			8			
Serum diagnosis:									
Typhoid fever (Widal).....	4	11	15	4	17	21	20	32	52
Typhoid fever (incomplete agglutination).....			22			5			12
Syphilis (Wassermann).....	11	29	40	19	46	65	15	18	33
Blood of domestic animals: Anthrax.....	2	3	5						
Serum reaction: Glan lers.....	2	2	4		2	2		7	7
Experimental inoculation: Rabies to guinea pigs.....						2			
Examination of tissues for negri bodies: Dogs.....				1		1			
Urine: Chemical and microscopical examination.....			72			71			49
Chemical and microscopical examination: Human milk.....									
Transudates, exudates, and secretions:									
Sputum (tuberculosis).....	27	53	80	32	49	81	46	61	107
Other bacterias.....	13		13	9		9	9		9
Pulifer (bacillus).....									
Pharyngeal exudate (diphtheria).....	20	227	247	3	17	20	11	43	54
Pharyngeal exudate (pseudo diphtheria).....				2		2			
Leprosy.....	4	8	12						
Uretral exudate (gonococcus and other bodies).....	1		1	2		2	1		1
Investigation for meningococcus:									
Cerebrospinal fluid.....									
Perispherical blood.....									
Nasal-pharyngeal exudate.....									
Puncture of the heart.....									
Lumbar puncture.....									
Hem culture.....									
Bacteriological examination:									
Water.....						8			4
Cow milk.....									2
Feces, intestinal parasites:									
Amebas.....	1		1						
Trichocephalus.....	13		13	14		14	19		19
Uncinaria and trichocephalus.....	1		1	2		2	2		2
Ascarides.....	12		12	2		2	1		1
Ascarides and trichocephalus.....	1		1	2	15	17	2	19	21
Ascarides and bilharzia.....									
Anguillulas, ascarides, and trichocephalus.....									
Uncinaria-cerchomona and trichocephalus.....									
Bilharzia, trichocephalus, and anguillula.....									
Bilharzia, uncinaria, and trichocephalus.....									
Cysticercus.....									
Uncinaria.....	4		4	2		2	1		1
Samples returned.....			4			17			7
Total.....	212	509	805	167	450	724	217	929	1,223

Table showing the total number and kinds of analyses made in the biological laboratory during the fiscal year ended June 30, 1919—Continued.

	May.			June.			Total.		
	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.
Hematological examination:									
Human blood—									
Malaria.....		499	499		200	200		2,461	2,461
Malaria plasmodium vivax.....	27		27	10		10	364		364
Malaria plasmodium falciparum.....	35		35	9		9	304		304
Malaria plasmodium malaria.....							1		1
Puncture of spleen for malaria.....								2	2
Filaria.....		2	2	1	2	3	13	31	44
Differential count.....			6						23
Leucocytic count.....			2						18
Serum diagnosis:									
Typhoid fever (Widal).....	34	68	102	18	38	56	117	310	427
Typhoid fever (incomplete) agglutination.....			7			17			82
Syphilis (Wassermann).....	18	29	49	15	30	45	270	313	583
Blood of domestic animals: Anthrax.....							2	5	7
Serum reaction: Glanders.....		5	5	1		1	7	23	30
Experimental inoculation: Rabies to guinea pigs.....			2			2			8
Examination of tissues for negri bodies: Dogs.....	1		1	1		1	3	1	4
Urine: Chemical and microscopical examination.....			68			69			698
Chemical and microscopical examination: Human milk.....			2			1			4
Transudates, exudates, and secretions:									
Sputum (tuberculosis).....	42	59	101	26	55	81	475	605	1,080
Other bacterias.....	1		1				32		32
Phlifer (bacillus).....							4		4
Pharyngeal exudate (diphtheria).....	4	17	21	2	12	14	110	464	574
Pharyngeal exudate (pseudo diphtheria).....							8	4	12
Leprosy.....							8	12	20
Urethral exudate (gonococcus and other bodies).....	2	1	3	1	3	4	102	347	449
Investigation for meningococcus:									
Cerebrospinal fluid.....	2	5	7	1	19	20	3	26	29
Perispherical blood.....	1		1	1	18	19	2	18	20
Nasal-pharyngeal exudate.....		68	68		9	9		77	77
Puncture of the heart.....					2	2		2	2
Lumbar puncture.....					2	2		2	2
Hemoculture.....						2			2
Bacteriological examination:									
Water.....			4						41
Cow milk.....			9						11
Feces, intestinal parasites:									
Amebas.....				1		1	2		2
Trichocephalus.....	9		9	3		3	115		115
Uncinaria and trichocephalus.....	4		4	5		5	26	9	35
Ascarides.....							26		26
Ascarides and trichocephalus.....				4		4	17	34	51
Ascarides and bilharzia.....							1		1
Anguillulas, ascarides and trichocephalus.....		17	17				1	17	18
Uncinaria-cerchomona and trichocephalus.....							1		1
Bilharzia, trichocephalus and anguillula.....							1		1
Bilharzia, uncinaria and trichocephalus.....							1		1
Cysticercus.....							1		1
Uncinaria.....				2	10	12	32	103	135
Samples returned.....			11			19			150
Total.....	180	770	1,061	101	402	613	2,049	4,866	7,063

RECAPITULATION.

Positive.....	2,049
Negative.....	4,896
Nonclassified.....	887
Samples returned.....	150
Total.....	7,982

Examination of rodents at San Juan.

Month.	Negative.			Month.	Negative.		
	Rats.	Mice.	Total.		Rats.	Mice.	Total.
July.....	500	203	703	February.....	535	182	717
August.....	465	137	602	March.....	478	174	652
September.....	512	184	696	April.....	632	174	806
October.....	571	161	732	May.....	546	205	751
November.....	584	134	718	June.....	530	196	725
December.....	580	144	724	Total.....	6,404	2,011	8,415
January.....	473	148	621				

Dr. D. BIASWECHER,
Director Biological Laboratory.

CHEMICAL LABORATORY.

OFFICIAL DUTIES.

The chemical laboratory has charge of police investigations and of investigations for the treasury department; the rendering of chemical-legal and medico-legal reports for the seven district courts; the inspection and analysis of foods and drugs, and the preparation of such technical opinions as any department of the insular government may request.

NATURE OF WORK DONE.

Physical, chemical, and biological examinations have been made of 1,810 specimens of matter of different classes. Said biological work was done on blood stains by trying precipitin, and was carried out in the development of the original investigations which were taken charge of by the director of the laboratory to simplify the diagnosis of said stains in criminal cases.

During the current fiscal year analytic work on medical prescriptions and crude drugs was continued. In addition examination of all kinds of foodstuffs (special attention having been given to cow's milk), refreshing drinks, and liquors was carried on. Due to the fact that prohibition has been in force since March, 1918, the number of samples of alcoholic drinks for the purpose of determining their purity has increased considerably. A large number of samples of liquor were examined to determine their alcoholic strength, such examinations having been made for the office of the treasurer of Porto Rico, which, in accordance with law, has fixed 2½ per cent as the maximum limit of alcohol for the aforesaid drinks. And as such importations must be examined regularly to ascertain whether or not the law is complied with as regards the alcoholic strength of said liquor, the number of such samples is constantly on the increase.

ADULTERATION OF MILK IN THE ISLAND.

Out of 977 samples of cow's milk 165 were of excellent quality, 94 good, 288 fair, 84 poor, 48 suspicious, 257 adulterated, and 41 unclassified. The greatest number of samples of milk was taken in San Juan (160). Other towns follow in the order shown: Mayaguez (130), Aguadilla (64), Guayama (57), Ponce (52), Bayamon (52), San German (44), Arecibo (39), Caguas (35), and other towns which forwarded less than 35 samples. It is not useless to say that adulteration of milk has been carried on by the addition of from 5 to 25 per cent of water. Such adulteration has been most exaggerated in San German, where the majority of the samples examined showed the addition of over 25 per cent, and some of over 50 per cent of water.

LEGAL CONSIDERATIONS ON THE ADULTERATION OF MILK.

It would be of interest to give in a general manner the history of such legislation enacted since the American occupation as deals with the punishment for and endeavors to suppress, or at least to reduce, the adulteration of milk in Porto Rico. The drastic law now in force was approved in 1910. In order to convict said statute does not require the establishment of criminal intent in the adulteration of milk. Moreover, the judge is bound to impose a penalty of imprisonment when the fact itself is shown that such milk is sold, transported, or offered for sale.

The legislator in his desire to punish with an iron hand the wholesale murderers of children and sick excluded fines in reprehension of the criminal and vandalic act of slowly poisoning others with adulterated milk. As a punishment he has stipulated from one to 30 days in jail for the first offense, and from six months to one year for subsequent offenses. The sentence of the court also includes the publication of the penalty in the newspapers and the closing of the depot for the greater shame and discredit of the convict. Up to 1910, or in other words, prior to the approval of said act, the adulteration of milk was never punished by imprisonment, but by fine, which never exceeded \$25. Sentences ordinarily ran from fines of from \$1 to \$15, as shown by municipal court files.

Percentage of samples of adulterated milk from the year 1901 to date.

	Per cent.		Per cent.
1901-2	25	1910-11	50.5
1902-3	20.7	1911-12	26.6
1903-4	23.8	1912-13	20.6
1904-5	25.8	1913-14	11.9
1905-6	28.7	1914-15	21.2
1906-7	37	1915-16	19.9
1907-8	25	1916-17	21.6
1908-9	23.4	1917-18	22.5
1909-10	21.3	1918-19	26.3

¹ Act governing the sale of cow's milk was approved.

As citizens who are conscious of their duties we must admit that the habitual adulterator still remains imperturbable in his cowardly work, which means a high rate of mortality among children under 2 years of age.

PURIFICATION OF THE WATERS OF THE SAN JUAN AQUEDUCT.

The continuation of the use of sulphate of alumina as the coagulant has been recommended to the municipal authorities. Also the use of sulphate of copper instead of hypochlorite of lime as disinfectant, since the former is more efficient, economical, obtainable, stable, and exempt from color and taste, in the amount used.

Since 1904 sulphate of copper has been intermittingly used in Lake Clifton, from which the Baltimore waterworks are supplied, and the fact is mentioned that coli bacilli were found in said aqueduct on June 28, 1915, in every cubic centimeter of water examined. But the mere addition of 1 milligram of sulphate of copper for every 6 liters of water was sufficient to cause their disappearance in a few days.

Month.	Purification of water.	Cases of typhoid fever in the city during the month.
June	No copper was used	24
July	do.	33
August	Use of copper was begun on the 19th	52
September	Copper was used	16
October	do.	16
November	do.	8
December	do.	4
January	Use of copper was suspended on the 6th	91
February	No copper was used	376
March	do.	279

INTOXICATION WITH POISONOUS LIME BEANS.

Two deaths which occurred in Isabela from the ingestion of beans harvested here were investigated, and the chemical analyses of the beans showed that they belonged to the same Burma variety that was imported from Venezuela, the confiscation and destruction of which, in large quantities, was ordered by the chemical laboratory last year. A small proportion of these beans surely must have escaped seizure and was planted and harvested in some sections of the island.

LABORATORY MATERIAL CEDED TO THE COLLEGE OF AGRICULTURE AT MAYAGUEZ.

Part of our material has been loaned to the College of Agriculture and Mechanic Arts at Mayaguez, whose excellent and well equipped laboratory was totally destroyed by the earthquake of October 11, 1918. We were guided in our purpose by the desire of aiding them to establish their provisional laboratory until such time as they may receive the proper aid in equipping the same with new and modern material.

MODIFICATION OF SANITARY REGULATIONS.

Section 2 of regulations No. 53 relative to storage and sale of foods and drugs in the island of Porto Rico, contains a grave error which should be amended because it greatly obstructs the work of the inspectors. On page 2, lines 3 and 4, where it reads "giving receipt therefor," it should say "taking receipt therefor." Said provision as now drafted conflicts openly with the provisions of the Federal Pure Food and Drugs Act, approved June 30, 1906, which applies to Porto Rico.

According to recently approved regulations on the registration and sale of proprietary and patent medicines, a chemical analysis of the medicine whose formula is registered must be made to corroborate the veracity of the formula. Manufacturers submitting their formulæ for approval desire rapid action and that no objections be made to the registration, since this official act is the starting point of their business. Therefore, we must suppose that if such manufacturers submit samples prepared by themselves such samples will always agree with the formula presented.

It does not seem natural to devote time and materials to the analysis of samples prepared and submitted by the interested party himself. This objection has been noted in the United States, as is proven by the fact that regulations of analogous nature do not require the analysis of samples submitted by the interested party together with the formula, but that the veracity of the formula submitted is accepted and the same is judged on its merits. Later, and when the product is already on the market, it is analyzed by taking a sample from any establishment where it is freely sold. This procedure seems more natural, for it will at any time show the good faith of the manufacturer. Hence regulations of this kind should contain some provision covering cases where the analysis does not agree with the formula, and where, if the manufacturer is convicted, the sentence will serve for the revocal of the formula by the commissioner of health.

DESTRUCTION OF DAMAGED ARTICLES.

A large number of foodstuffs of different kinds were found unfit for public consumption and it was ordered that they be used for other purposes, but in no case have the articles been wasted. Rank lard, butter, and other edible fats were aired, purified, and treated with alkalies, and made into soap by household procedure. Hardened condensed milk has been successfully used in the preparation of sweets. Grains infested by worms and weevils were sterilized with carbon bisulphid, sifted and made into flour. And finally, if no other disposition could be made of the article so that it might be improved and used for food, some substance to denature it was added so that it could be used later as food for hogs and for industrial purposes. When because of their condition foodstuffs could not be used at all, whether in industry or to feed animals, they were burned or otherwise destroyed.

Foodstuffs destroyed during the fiscal year.

	Pounds.
Canned meats and vegetables.....	157,187
Milk and milk products.....	14,915
Cereals and their products.....	89,924
Other grains.....	3,189
Total.....	265,215

DRUGS.

	Grams.		Grams.
Powdered aconite.....	300	Spanish chamomile.....	250
Aniseed.....	300	Walnut (leaves).....	250
Poppy.....	250	Rhubarb (powdered).....	7,500
Arnica (flowers).....	1,200	Violets (flowers).....	500
Aromatic galamio.....	550	Viper root.....	200
Powdered colchicum.....	300		
Jalapa (powdered).....	2,100	Total.....	14,900
Linum (powdered).....	1,000		

Denatured foodstuffs used for industrial purposes as food for animals.

Corn meal.....pounds..	126,971	Soup paste.....pounds..	40
Beans.....do.....	6,887	Menudos de cerdo.....do.....	100
Rice.....do.....	4,324	Canned sardines.....cans..	144
Garlic.....do.....	7,530	Lard.....pounds..	500
Gandules.....do.....	293	Condensed milk.....cans..	48
Potatoes.....do.....	48	Cow's milk.....liters..	81
Codfish.....do.....	9,860	Beans and pork.....cans..	7
Evaporated milk.....cans..	1,920	Cheese.....pounds..	20
French beans.....pounds..	200	Wheat flour.....do.....	30,831
Crackers.....do.....	4,310	Sweets.....do.....	200
Garavances.....do.....	26	Corn.....do.....	3,000
Herring.....do.....	10,800	Figs.....do.....	60
Bacon.....do.....	150		

Totals, 206,150 pounds, 2,119 tins, and 81 quarts.

EXPLANATION OF TABLES.

Table No. 1 shows the work done during the fiscal year, articles being classified according to quality.

Table No. 2 shows origin of samples.

Table No. 3 shows origin of samples of cow's milk and classification of such samples.

Table No. 4 shows the nature of violations and the number of cases recommended for criminal prosecution in the different courts of the island.

Criminal cases in the courts of the island.

Number of cases reported.....	168
Number of cases convicted and condemned.....	103
Number of cases acquitted.....	26
Number of cases pending reports from courts.....	28
Number of cases filed.....	21

Municipality.	Cases reported.	Acquitted.	Condemned.	Quashed.	Pending.
San Juan.....	57	5	14	14	4
Ponce.....	15	1	6		8
Mayaguez.....	84	19	63		12
Arecibo.....	12		8		4
Agua-fuilla.....	13	1	5	7	
Humacao.....	7		7		
Guayama.....		(1)	(1)		
Total.....	168	26	103	21	28

¹ No report submitted.

TABLE NO. 1.—*Work performed during the fiscal year 1918-19 classifying the samples as to quality.*

	Excellent.	Good.	Fair.	Inferior.	Suspicious.	Adulterated.	Bad.	Positive.	Negative.	Unclassified.	Contaminated.	Total.
Milk and milk products:												
Cow's milk.....	167	93	236	86	46	252				47		977
Condensed milk.....	7	3		1								10
Evaporated milk.....	1	2										4
Butter.....	2	2										2
Cheese.....		1							1			2
Oils and fats:												
Olive oil.....				7		6						13
Leaf lard.....		5					1					6
Cereals and their products:												
Rice.....		20		17			12					6
Oatmeal.....		1						4	1			10
Corn meal.....		3		3			4					3
Wheat flour.....		1	1				1					18
Bread.....		10		3			5					3
Crackers.....		2					1					
Leguminous seeds and their products:												
Lima beans.....							3					3
Beans.....		5					9					14
Peas.....		1										1
Saccharine products, sugar							2					2
Preserved fruits:												
Pears.....		3										3
Peaches.....		2										2
Refreshing beverages:												
Kola champagne.....		1	1			2						4
Lemonade.....		3	3			2	3					11
Raspberry.....		1	1			5						8
Vanilla.....				1			1	2				4
Grapefruit juice.....		1										1
Orange sirup.....		1										1
Strawberry sirup.....		1										1
Alcohol and alcoholic preparations, de-												
natured alcohol.....										8		8
Denaturing agents:												
Gasoline.....		4										4
Kerosene.....		1										1
Victoria green.....		1										1
Vinegar, artificial.....			1			8						9
Canned meats and vegetables:												
Devilled ham.....		1					1					2
Sausages.....		1					2					3
Peas.....		1					1					2
Sardines.....		1					1					2
Tomato ketchup.....		3										3
Beans and meat.....							1					1
Preserved meats:												
Pork chops.....		1										1
Pig's feet.....		1										1
Bacon.....		1										1
Morta-lalla.....			1									1
Herring.....		2					2					4
Boiled ham.....		1										1
Ham.....		1					3					4
Codfish.....		8	1				1					10
Bologna sausage.....							1					1
Water:												
Drainage of sugar centrals.....							6					6
For sanitary analyses.....		5					3					8
Drugs and chemical products:												
Betha-naphthol.....		1										1
Thymol.....		1										1
Salicylic acid.....		1										1
Sulphate of zinc.....		11										11
Boric acid.....		4										4
Morphine tablets.....									1			1
Sodium sulphate.....		2		1		1						4
Proprietary and patent medicines:												
Hoffman's water.....											1	1
Purgasol.....											1	1
Fastep (foot powder).....										1		1
Official preparations:												
Lime water.....						1						1
Belladonna tincture.....		2										2
Belladonna ointment.....		2				2						4
Tincture of iodo-line.....		13				7						20
Tincture of aconite.....		1										1
Elixir pargoric.....		2										2
Tincture of nux vomica.....		1										1

TABLE NO. 1.—*Work performed during the fiscal year 1918-19 classifying the samples as to quality—Continued.*

	Excellent.	Good.	Fair.	Inferior.	Suspicious.	Adulterated.	Bad.	Positive.	Negative.	Unclassified.	Contaminated.	Total.
Official preparations—Continued.												
Tincture of digitalis.....		2										2
Spirits of camphor.....					3	6						9
Oil of camphor.....						1						1
Arnica tincture.....		1										1
Citrate of magnesium.....		1										1
Mixture of rhubarb and soda.....		1										1
Basilicon ointment.....		1										1
Opodeldec.....		1										1
Camphorated ointment.....		1				1						1
Medical prescriptions: Pharmaceutical preparations (influenza extinction).....												24
Investigations in connection with the prohibition act No. 69 of 1917:												
Beverages containing more than 24 per cent alcohol per volume (rejected from market).....												8
Beverages containing 24 per cent alcohol or less (accepted).....												36
Denatured alcohol sold as intoxicating beverages.....												7
Medical preparations examined to determine if sufficiently medicated to prevent their use as intoxicating beverages:												
Accepted.....												13
Rejected.....												1
Alcoholic liquid sold in violation of law (similar to drinkable rum).....												4
Medico-legal investigations:												
Iron weight examined for blood stains.....									1			1
Alcoholina.....										1		1
Alcoholic liquid.....										2		2
Aromatic alcoholic liquid.....										2		2
Alcoholic liquid containing fruits.....										1		1
Soil containing waste from clandestine rum factory.....										1		1
Analysis of unknown substance to determine stimulant used on race horses.....										1		1
Dog's vicieras (toxic substance).....										1		1
Human vicieras.....										1		1
Corrosive liquid producing blindness.....										1		1
Essential oils:												
Bay.....		16										16
Cloves.....				3								3
Lavandula.....				3								3
Bergamot.....				3								3
Rosemary.....				4								4
Lemongrass.....				1								1
Lemon.....				1								1
Thyme.....				1								1
Cinnamon.....				1								1
Neroli.....				1								1
Investigations of epidemics:												
Urine (test for metals—polyneuritis).....									4			4
Rice (test for vitamins—polyneuritis).....		41	22				202					265
Miscellaneous:												
Perfume products analyzed to determine if in accordance with approved formula:												
According to formula.....										4		4
Not according to formula.....										47		47
Ice.....		1				2						4
Coloring matter.....		3		1								3
Powdered coffee ¹		24				5						29
Tobacco scraps ²							1					1
Gasoline ³		8										8
Potatoes.....						1						1
Bee ⁴ honey.....						1						1
Total.....	175	334	316	140	49	302	268	6	7	211	2	1,809

¹ Adulterated coffee contains 50 per cent burnt sugar.² Mixed with earth.³ To determine its grade for automobile use.

TABLE No. 2.—Source of food and drugs and number of samples examined.

Adjuntas.....	20	Rio Piedras.....	30
Aguadilla.....	78	Sabana Grande.....	15
Arecibo.....	45	Salinas.....	7
Albonito.....	3	San German.....	45
Arroyo.....	10	San Juan.....	167
Bayamon.....	62	San Lorenzo.....	1
Barros.....	1	San Sebastian.....	21
Cabo Rojo.....	44	Santa Isabel.....	1
Caguas.....	46	Toa Alta.....	1
Camuy.....	7	Trujillo Alto.....	1
Carolina.....	8	Utusado.....	11
Cayey.....	5	Vega Alta.....	22
Ciales.....	40	Vega Baja.....	4
Coamo.....	1	Vieques.....	10
Corozal.....	6	Yabucoa.....	1
Fajardo.....	5	Yauco.....	2
Guanica.....	22	Mayor of San Juan.....	1
Guayama.....	58	Base hospital.....	1
Gurabo.....	2	Bureau of supplies, printing, and transportation.....	18
Hatillo.....	2	Camp Las Casas.....	1
Humacao.....	5	Commissioner of health.....	1
Isabela.....	3	Investigation committee (department of health).....	2
Jayuya.....	2	Mayaguez district court.....	1
Juana Diaz.....	6	Fiscal, San Juan.....	1
Juncos.....	17	Fiscal, Ponce.....	1
Lajas.....	2	Quarantine hospital.....	24
Lares.....	1	Investigation for beriberi.....	4
Las Marias.....	1	Food and drug inspector, northern district.....	3
Las Piedras.....	1	Food and drug inspector, San Juan.....	104
Manati.....	37	Food and drug inspector, southern district.....	3
Mayaguez.....	140	Chemical laboratory (beriberi).....	264
Moca.....	3	Insane asylum.....	1
Morovis.....	1	Penitentiary.....	1
Patillas.....	4	Treasurer of Porto Rico.....	18
Ponce.....	58		
Quebradillas.....	2		
Property clerk.....	1		
Rio Grande.....	5	Total.....	1,811

TABLE No. 3.—Source and classification of samples of cow's milk, 1918-19.

Towns.	Excel- lent.	Good.	Fair.	In- ferior.	Suspicious of adulter- ation.	Adul- ter- ated.	Un- classi- fied.	Tota- l.
Adjuntas.....	4	1	5	1			5	1
Aguadilla.....	3	11	17	14	6	1	12	6
Arecibo.....	8	9	7	3		2	10	3
Albonito.....	1	1					1	
Arroyo.....	3			2	1		2	
Bayamon.....	6	2	20	10	3	2	9	5
Cabo Rojo.....	2	4	15	2	1		6	3
Caguas.....	3	2	20	4	3		3	3
Camuy.....		1	1	1		1		
Carolina.....	2		4				2	
Cayey.....							3	
Ciales.....	3	1	12	6	2		2	2
Corozal.....	1					2	1	
Fajardo.....	1	1			2	1	1	
Guanica.....		1	6	1			3	1
Guayama.....	22	8	16	3		2	6	1
Gurabo.....						2		
Hatillo.....	1		1					
Humacao.....	2		1	2				
Isabela.....								
Juana Diaz.....	4	1					1	
Juncos.....	1	1	4	1	2	5	1	
Lajas.....			1				1	
Lares.....	1						1	
Las Marias.....		1						
Manati.....	8	7	10	3	2	2	2	
Mayaguez.....	4	10	27	6	4	11	68	1
Ponce.....	5	3	9		8		27	
Rio Piedras.....	6	3	8	4	1		6	
Sabana Grande.....					1		4	
Salinas.....	1		4					
San German.....		6	9	3	1	8	15	
San Juan.....	47	15	62	2	8	2	24	1
San Lorenzo.....							3	
San Sebastian.....	4		4	1		2	5	
Toa Alta.....		1						
Trujillo Alto.....			1					

TABLE No. 3—Source and classification of samples of cow's milk, 1918-19—Continued.

Towns.	Excel- lent.	Good.	Fair.	In- ferior.	Suspi- cious of adul- teration.	Adul- ter- ated.	Un- classi- fied.	Total.
Cuado.....						1	2	5
Vega Alta.....	5	1	2	3		1	6	22
Vega Baja.....	1				1		2	4
Vieques.....	1		1	4		1		7
Yanco.....		2	7	3			2	14
Base hospital.....				3				3
Laboratory.....				1				1
Food and drug inspector, San Juan.....	4		3		2		2	11
Food and drug inspector, northern district.....				1			8	9
Food and drug inspector, southern district.....	4	1	5				11	21
Total.....	165	94	288	84	48	41	257	977

DIVISION OF SANITARY ENGINEERING.

This division is composed of three engineers, two plumbing inspectors, one draftsman, one assistant draftsman, and a stenographer. Its characteristic functions consist of the examination and approval of all kinds of plans, whether for the construction, reconstruction, repairs, enlargement, or alteration of houses, buildings, etc., or for plumbing, aqueducts, and sewerage systems, and in either case of making such inspection and investigation as such works require. It also carries out other studies, such as the study of river courses, drainage of sugar mills, drainage, medical topography, etc.

Little more than 15 years have elapsed since engineering became a natural part of sanitary organizations in many States of the Union and in some European countries. Heeding the voice of progress and having fully understood the unquestionable importance of this branch, Porto Rico create this division in 1911. It must be stated that although private interests showed certain resistance against the respective activities, it was in no case as great as the resistance made in France when the Berthelot Act required previous report to the sanitary authorities of all plans of houses under construction in order to insure healthful habitations. In Porto Rico public interests have been victorious.

Prior to 1911 construction was carried on arbitrarily and capriciously in Porto Rico, without a plan for scientific urbanization in harmony with modern hygiene. Construction was regulated by municipal ordinances inspired by a misunderstood sense of beauty, and absolutely forsaking health.

Dwelling hygiene was never considered, said dwelling being at most taken as a more or less complete refuge from the weather. Routine was sovereign, the health of the inhabitant not being considered.

In establishing that the healthfulness of a dwelling exercises powerful influence on the health of the inhabitants, this principle being based on the observation and experience that rooms not spacious enough or insufficient for the number of occupants and badly lighted, poorly ventilated, damp, and in no way appropriate for the normal functioning required by physical and psychic life, constitute one of the most important factors in the genesis of tuberculosis (called by some one dwelling disease) and of many infecto-contagious diseases, as well as a not small number of mental disorders. In formulating these postulates sanitary engineering inspired the Insular Board of Health of Porto Rico to draft the following regulations, the enunciation only of which is sufficient to form a perfect judgment of the sanitary progress made in the island along such lines.

The regulations are: Regulations No. 2, relative to tenement houses, including the closing of same when because of their bad sanitary condition they are considered uninhabitable. Regulations No. 3, providing for rat-proof construction and conservation of buildings and their dependencies. Regulations No. 6, establishing sanitary requirements for the urbanization of lands in the island of Porto Rico. Regulations No. 7, governing plumbing and sewerage. Regulations No. 14, to keep houses, buildings, and their dependencies in hygienic condition, and to regulate construction in towns. Regulations No. 19, relative to ventilation, and regulations No. 63, regulating

the percentage of each building which must be reserved for the courtyard, which percentage varies according to locality, that is, according to streets, plazas, etc.

PLANS APPROVED.

Two thousand and seventy-two plans for construction, reconstruction, enlargement, alteration, and repairs, and 1,918 for plumbing installations were approved during the present fiscal year.

Construction has increased not only as to number of buildings but also as to importance. The increase in number may be seen from the diagram showing permits for construction issued by the municipality of San Juan from 1880 to 1918. It will be noticed that from 1880 to 1903 the number of permits issued yearly was about 50 as a maximum. In the year 1907 said number increased extraordinarily, reaching 500. During the following years there was a decrease, but in 1913 the number reached its maximum, 1,057 permits. An increase in construction has also been noted in other municipalities of the island.

The importance of the buildings recently constructed is shown by that of the Royal Bank of Canada, the Y. M. C. A., the Carnegie Library, the Telephone Building, the American Railroad Station, the Porto Rican Casino, the Palace Hotel, the Hotel Condado, the Bouret Building, the Tobacco Palace, etc.

PLUMBING.

Regulations No. 59, of great importance, became effective this year. These regulations make one sole category out of apprentice, journeymen, and master plumbers, or, in other words, calls them all plumbers. Regulations No. 62 were approved this year and rendered effective. These regulations authorize the board of plumbers' examiners, with the approval of the commissioner, to issue special certificates to journeymen plumbers. Said regulations will contribute to make better plumbers.

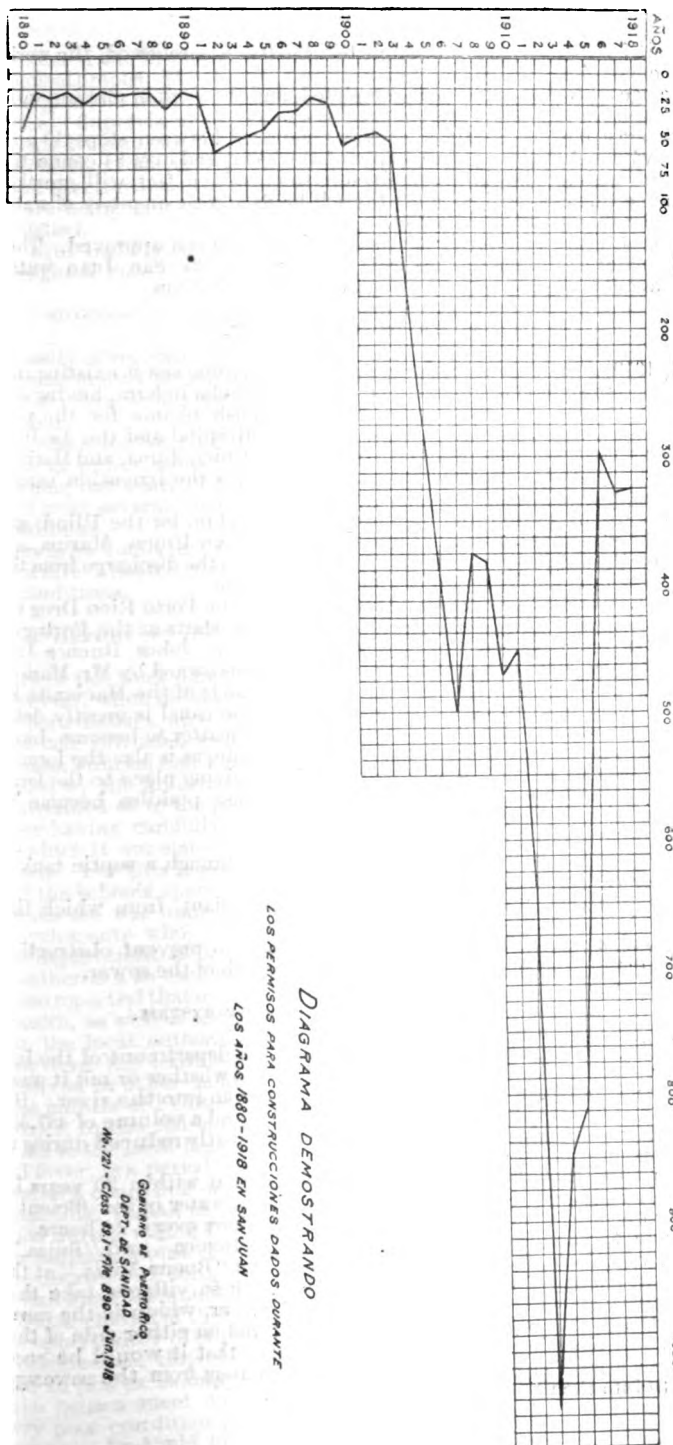
Examinations for master and journeymen plumbers were held July 13, 1919. Eighteen took the examination for master plumber, out of which 4 passed. The journeymen plumbers' examination was taken by 13, only 1 having passed.

Another examination was held December 30 of the same year, but this time for plumbers only, for regulations No. 59 became effective January 1, 1919. Twenty-six candidates took the examination, out of which 8 passed.

Eighteen special certificates were issued to journeymen plumbers. Through these certificates such journeymen plumbers acquire the same rights as plumbers.

Table showing number of sanitary pumping installations made during the fiscal year 1918-19.

Months.	Plans.		Total number of plans examined.	Number of fixtures approved.				Total.
	Ap-proved.	Re-jected.		Lavatory and kitchen.	Bath tubs.	Water-closets.	Other fixtures.	
July.....	50	5	55	85	56	66	23	229
August.....	95		95	149	27	115	85	376
September.....	70	23	93	141	30	94	62	327
October.....	63	17	80	78	42	51	14	185
November.....	58	3	61	71	68	81	9	229
December.....	62	3	65	87	12	67		166
January.....	52	1	53	43	40	52		172
February.....	81	5	86	122	56	87	27	292
March.....	94	10	104	115	95	131	27	368
April.....	101	3	104	154	86	114	34	388
May.....	99	7	106	134	80	129	45	388
June.....	98	4	102	143	95	136	34	408
Total.....	918	81	999	1,322	686	1,124	396	3,528



AQUEDUCTS AND SEWERAGE SYSTEMS.

The permit for the sewerage system of Rio Piedras was renewed, the work having been commenced.

The sewerage system of Yauco was completed, and the work of making various connections begun.

The sewerage system of Santurce, section comprised between stops 10 and 15, including the whole of Miramar, was completed this year, and over 84 connections have already been made. This is a combined system, which fact will greatly benefit Miramar, since this is a section where the soil holds a great quantity of water which will now find a direct and rapid outlet.

An aqueduct system for the insular sanatorium has been approved. The piping, which is 4 inches in diameter, runs from the piping of the San Juan water works and branches out to supply water to all parts of the sanatorium.

PUBLIC SEWER IN PONCE.

In April, 1919, a general inspection was made of a public sewer existing in the city of Ponce. Said sewer is constructed of brick and is circular in form, having a diameter of 8 inches. It was constructed during the Spanish régime for the purpose of draining the plumbing installations of the Tricocoche Hospital and the Asylum for the Blind. It commences near the hospital, runs through Union, Luna, and Marina Streets, and empties next to the Parque de la Abolicion into the irrigation canal of the Hacienda Reparada.

Besides the discharge from the hospital and the Asylum for the Blind, said sewer carries the direct discharge from 12 buildings located on Union, Marina, and Luna Streets and on the streets leading to the market, and also the discharge from the sewers recently constructed on Dr. Pujals and Comercio Streets.

The only connection having a septic tank is that of the Porto Rico Drug Co. This canal, which serves to irrigate the Hacienda Reparada, starts at the Portuguese River and crosses Comercio, Aurora, First, Second, Third, Cruz, Jobos, Buencas Aires, Gran Via, Salud, Marina, and Concordia Streets, and the lands owned by Mr. Mario Mercado behind the Hotel Frances. It then empties on the lands of the Hacienda Reparada next to the American Railroad station. Said irrigation canal is greatly deteriorated and hardly ever carries water, which fact causes fecal matter to become deposited on the way. The place where it discharges is inappropriate, as is also the form in which it discharges, for this is done directly onto the lands, giving place to the formation of puddles, which present a disagreeable aspect. These puddles become veritable public nuisances, since they are focuses of infection.

The following was recommended:

- (1) That proprietors be obliged to run the seepage through a septic tank before it goes into the sewer.
- (2) The sewer should discharge into a purification plant, from which the waters should run to the lands after treatment.
- (3) Flush tanks should be installed every 300 feet to prevent obstruction of the sewer and to maintain cleanliness throughout the length of the sewer.

DRAINAGE OF PROPOSED SEWERAGE SYSTEM.

On application of the mayor of Humacao and of the department of the interior an inspection was made of the Humacao River to ascertain whether or not it was possible to empty the seepage from the projected sewerage system into the river. Hence the river was gauged near the town on September 4, 1918, and a volume of 487.35 liters of water a second was found. This quantity is at times greatly reduced during the cane-cultivating season.

Bearing in mind that the population is 5,690 and that within 30 years it will be approximately 7,153, it will be seen that the volume of water is insufficient properly to dilute the seepage, which will be about 1,072,950 liters every 24 hours.

Furthermore, three villages exist downstream—"La Bejuca" and "Suiza," 2 and 4 kilometers, respectively, from the city of Humacao, and "Buena Vista," at the mouth of the river at about 6 kilometers from the city. These villages take their water supply for drinking and domestic purposes from the river, which is the case with all who live on the river margins, and with cattle pastured on either side of the stream.

In view of the foregoing conditions it was reported that it would be necessary to construct some system of purification plant for the waters from the sewerage system and to empty into the river only the treated sewage.

INSULAR SANATORIUM.

Construction of the insular sanatorium on a parcel of land 106.97 cuerdas, donated by the philanthropist, Mr. Pedro Arzuaga, was commenced September 26, 1918. The general plan and those of the different pavilions and other buildings were prepared by this office. Supervision and management of all constructions at the sanatorium is vested in this division, with the approval of the commissioner of the interior.

A telephone line connecting with the Rio Piedras station has been installed.

Plans and specifications for water piping running from the San Juan-Rio Piedras aqueduct are being prepared, and fire hydrants, fountains, and sprinkling faucets will be installed.

Electric-light installation has been surveyed in accordance with the Porto Rico Railway, Light & Power Co.

MOVING-PICTURE THEATERS, DANCE HALLS, LECTURE ROOMS.

The necessity of regulating the construction of buildings for recreation and meeting purposes being urgent, a compilation of data was made by consulting extensively the requirements of various American States and towns, local conditions having been borne in mind.

Not only was attention paid to light and air conditions, but also to the provision of means insuring public safety.

Commencing last year, 1918, all plans for theaters or moving-picture theaters were required to meet several conditions, a great number of such plans having conformed to said conditions.

And there is no doubt that after the Mayaguez catastrophe on June 19 in the Yaguez Moving Picture Theater, the public will better appreciate the importance of the aforesaid conditions.

ANNUAL REPORT OF THE MEDICAL INSPECTOR OF THE NORTHERN DISTRICT.

Summary of the work done by the undersigned from the beginning of February of the current year, when he was transferred to San Juan, to the office of medical inspector of the northern district, up to June 30, date of the expiration of the fiscal year 1918-19.

The first task intrusted to me was the inspection of the zones of Cayey, Caguas, Aguas Buenas, Juncos, San Lorenzo, Gurabo, Las Piedras, and Humacao, all of which were invaded by the influenza epidemic. Such inspection was ordered that a report might be obtained as to the period of the disease in each town.

And after having carefully inspected said jurisdiction I had the honor to make a report, in which it was stated that in Aguas Buenas and Cayey the disease was totally extinguished. For this reason the influenza hospital of the latter town was ordered closed and the schools opened in both towns. I also reported that in the remaining towns the disease was under control, there remaining but a few scattered cases and many convalescents who, more than medicine, needed proper food and clothing, which the department of health continued to supply regularly until in accordance with the authorities in each town the epidemic was declared extinguished.

It was also reported that due to the good organization of all the services of the department of health, as well as to the valuable aid rendered by the department of war, the Red Cross, the local authorities, and, above all, the medical class, which rendered efficient services, the terrible plague was controlled before it presented the disastrous results observed in other countries.

From the middle of February, when I commenced my inspection trips to the towns of the district, to the 23d of April, when by order of the commissioner I commenced to render aid to the local health officer of San Juan in combating the reigning epidemic of typhoid fever, is a period of time too short to enable me to render critical judgment on the sanitary condition of each one of the 43 towns forming the northern district. Notwithstanding, I shall enumerate the greatest sanitary deficiencies observed in the short period during which I have acted as district inspector.

From a sanitary point of view San Juan has improved very much, and were it not for the district of Puerta de Tierra, the source from which spring all the epidemics afflicting San Juan, it would be one of the most hygienic towns of the island.

When I took charge of the antityphoid vaccination in the recent typhoid epidemic, I had the opportunity of studying the antihygienic condition in which live the residents of Salسيدes, Hoyo Frio, Miranda, and Riera. There exist narrow, unpaved, damp, and in places swampy alleys, and lack of appropriate drainage. The greater part of the houses meet no sanitary requirements. The septic pools and latrines are in very poor condition for the reason that these swampy lands are improper for such purposes. And add to this the crowding of persons who live together in each

shack and we shall have an exact idea of the ease with which an epidemic of typhoid, paludism, tuberculosis, etc., can spread in such districts.

It is my duty to recommend to the director that the necessary measures be taken to carry out the transfer of the lower part of Puerta de Tierra to the place denominated "Escambron" on lands belonging to the Government of the United States and which are excellently situated, having been ceded to the municipality of San Juan for such time as may be necessary for the urbanization of the settlements in question.

In the work done in the extinction of the present typhoid fever epidemic, strict vigilance of the district of Puerta de Tierra was borne greatly in mind, and the few cases found therein were very urgently transferred to the municipal and quarantine hospitals, a general vaccination of all persons living in the houses contaminated having been effected as well as a disinfection, and a brigade of prisoners maintained scrupulous cleanliness in all suburbs, the results of which was the prevention of the spread of the disease in said districts.

In the other towns of the district a great deal has been done from the sanitary point of view, but not all that is to be desired. On the one hand, the poor financial condition of the majority of the municipalities, and on the other the high price of articles for the construction of sanitary works, such as iron pipes, cement, lumber, etc., have contributed to our slow progress. However, the local offices have made improvements in their labor and once normality of the financial situation of the country is reestablished our efforts shall be successful.

Statement of inspections made in the district accompanied by the food inspectors: Slaughterhouses, 48; butcher shops, 65; provision stores, 594; bakeries, 82; fruit stands, 202; provision warehouses, 92; hotels and eating houses, 110; cafes, 88; milk depots, 61; and schools, 40.

ANNUAL REPORT OF THE MEDICAL INSPECTOR OF THE SOUTHERN DISTRICT.

The report on the sanitary condition of the southern district, of which I am in charge, and on the work done by me in said district from July, 1918, to date, is summarized as follows:

On my recent inspection trips to the different towns during the last two months, I have been able to observe that the sanitary condition of said towns is excellent and that there does not exist at present any epidemic of any kind.

No epidemic at all appeared during the fiscal year 1917-18, measles, which had already appeared in the previous year, 1916-17, having disappeared during the first months of the year. But during the present fiscal year we have unfortunately been visited by influenza, the first cases of which commenced in the month of November, not one single town having escaped the attack, which was almost equally violent in all of them. I shall say nothing of this infection, which will be treated with due details by the commissioner and the chief of the division of transmissible diseases, but I desire to state that of the towns in my district those in which most deaths occurred from said disease were Mayaguez, 413; Ponce, 241, and Utuado, 235. San German and Arroyo, with 40 and 14 deaths, respectively, registered the lowest number.

We have had beside influenza cases of other infections which have determined the consequential loss of life, but in no case have any of them at any time constituted an epidemic.

Tuberculosis is always at the head of other infections as to the number of deaths which it causes, and although it is not considered epidemic because it does not take many lives in a short period of time, it does, however, cause as many deaths as any other infection of epidemic form. In Ponce tuberculosis caused 207 deaths during the year, and influenza a few more, 241, but in six or eight weeks. The difference is small, but what uneasiness did not the last-named disease cause in the public spirit, and with what indifference is not the first looked upon by the same public. In San German we had 30 deaths from influenza and 44 from tuberculosis. The same happened in Arroyo, where deaths from tuberculosis (22) were more in number than those from influenza (14).

I had the hope, and so stated it in my previous report, that deaths from tuberculosis would decrease in number, especially in Ponce, this hope being based on the idea that the municipality would construct for advanced cases of said disease a hospital which it had in project, but such was not the case. The project did not materialize. The dispensary existing in the local office and the sanatorium are insufficient to look after the great number of tubercular patients existing in the city. Moreover, visiting nurses are needed as well as means with which to aid people for the greater part extremely poor, and also other places besides the sanatorium where they can be isolated if there are no means of doing this in their homes, thus suppressing focuses of contagion. On the other hand it is impossible to obtain from physicians the report of all cases so as to take at the beginning such prophylactic measures as

may be necessary. Here in Ponce, where we had 207 deaths from tuberculosis, only 81 cases were reported to this office. In Mayaguez out of 118 deaths, 78 cases were reported, and in Yauco, where 52 deaths occurred, only 11 cases were reported, and thus in almost all the towns, where the cases reported to the respective local offices were less than the number of deaths. Therefore I insist on the appointment of visiting nurses, who in other countries already form an integral part of the sanitation service by reporting on the conditions of dwellings, so frequently responsible for infectious diseases, or by discovering cases of this disease not reported by the physicians, or by giving to parties interested practical instruction on the manner of preventing and treating said infectious diseases, by gathering statistical and epidemiological data, by enforcing quarantine measures, and, in a word, by making possible the practical employment of the medical experience and knowledge necessary to promote the health and welfare of all citizens.

Paludism is another of the infections which does not desire to leave us, principally in Ponce, where 83 deaths occurred. Eighty-one occurred in Guayama, 57 in Yauco, 74 in Juana Diaz, 50 in Salinas, 40 in Maunabo, and 23 in Patillas, or, in one word, practically in all the towns of the southern coast from Maunabo to Yauco, Guanica, and the coasts of Cabo Rojo. In many of these offices dispensaries have been established for the treatment of this disease, there having been special physicians in Guayama for the last two years, and lately in Guanica, where the commissioner personally observed the great number of patients, it being the duty of said physicians to study paludism in said regions and to endeavor to combat it by all means. I beg to suggest, however, that said physicians be supplied with microscopes, stains, and such supplies as are most necessary for the examination of blood at the places where they work. In this manner the work in the department's laboratory will be diminished, and it would not be necessary at times to wait more time than required in order to proceed in the proper way, prompt action being thus taken in serious cases.

Referring to typhoid fever, only isolated cases have occurred in different towns. During the whole year and in the entire district we have had but 27 deaths in 10 towns of the 32 that compose the district, in the following form:

Towns.	Cases reported.	Deaths.
Mayaguez.....	17	8
Yauco.....	8	6
Sabana Grande.....	11	4
Ponce.....	6	2
Santa Isabel.....	2	2

In each of the towns of Guanica, Guayama, Juana Diaz, San German, and Utuado but one death took place from this disease, so that outside of Sabana Grande, where a small focus existed, the cases in other towns may be considered sporadic, it being noticeable that the greater part were from the country, where the people commonly use the water of any creek, river, or stream, which, as is well known, are generally contaminated. As may be seen, in the city of Ponce proper this fever has disappeared, for, as I understand, the six cases reported are from the country and from the neighboring town of Penuelas, where some cases have occurred, although not in town, but in the country and along the river course to the settlement of Tallaboa on the coast, which belongs to said municipality. Since the termination of the aqueduct they have had no invasions of the disease in this town, where formerly important epidemics occurred.

Of smallpox there has not been one single case in the entire district. One case occurred in Guayama, which gave rise to some doubt, but Dr. Muñoz Morales considered it as a case of varicela. Vaccination has been continued in all the towns, the greatest number of people having been vaccinated in Mayaguez (16,582) during the year, Ponce following with 7,600, but in both places there have been special vaccinators.

We have had but 24 cases of diphtheria reported, and 14 deaths, the greatest number being in Guayama (8) and Yanco (7), with 3 deaths each, 2 in Yabucoa and but 1 in Ponce, Sabana Grande, Utuado, Cayey, and Cidra.

Several deaths from measles have also been noted, most of which occurred in Maunabo (27), which was one of the last towns visited by the epidemic during the first months of the current year.

Two cases of scarlet fever have recently occurred in Ponce and two in Yauco, but all such measures as have been deemed necessary have been taken, and up to the present time nothing has been heard of the appearance of new cases.

Several cases of parotiditis, specially in Ponce and Guayama, were also reported, but no deaths.

As may be seen from the foregoing, outside of influenza, which attacked us as it did other parts of the world, and of tuberculosis and paludism, the other infections, principally typhoid, smallpox, and diphtheria, which have not developed in this district during the year, and the sanitary condition of said district is excellent at the time of writing this report.

Few works tending to improve the conditions of health of the inhabitants have been carried out in the different municipalities during the present fiscal year. Juana Diaz obtained means for the construction of the aqueduct and Guanica is endeavoring to take their part of the surplus water of the Yauco waterworks, because their aqueduct is too expensive, produces no income, and the water is poor for cooking purposes. Notwithstanding the high price of material, Yauco decided to construct its sewerage system and it is already nearing completion. I believe they will be able to start making connections next month. Utuado has completed a good hospital, very well located and served. In the other towns of the district nothing has been done. On the contrary, in some towns, such as Mayaguez, Anasco, Ponce, and San German, many buildings used as hospitals and asylums, as well as others used for other municipal purposes, were destroyed or badly damaged by the earthquakes which occurred near the end of the last year. In Ponce the Tricoche Hospital, blind asylum, the city hall, the Perla Theater, and others were severely cracked. Up to the present time repairs have been commenced on but very few.

The street-cleaning service, removal of garbage, and sprinkling is carried out quite deficiently in all towns, but among the larger towns Ponce, Yauco, Guayama, and Juana Diaz beat the record for poor service. Among the small towns Cabo Rojo and Villalba leave much to be desired.

We have continued to treat uncinariasis in the greater number of towns. In some, as in Santa Isabel, nothing has been done. Not so in Utuado, Yauco, San German, Patillas, Aibonito, and Villalba (the last named by Inspector Fontanes of Juana Diaz), where the work done by the inspectors has been very good.

In my visits to the towns I have not failed to inspect personally the greater number of times all such establishments and places as are in any way related to public health. Many bakeries and provision stores, meat shops, milk depots, etc., always cause trouble because the persons in charge of their cleanliness do not do everything necessary to keep them in good sanitary condition.

Four hundred and forty-five visits of inspection to the towns of the district were made during the year. By express order of the commissioner other towns outside the district were also visited during the influenza epidemic, as follows:

	Visits.		Visits.
Yauco.....	40	San German.....	23
Sabana Grande.....	22	Penuelas.....	21
Guanica and Ensenada.....	20	Adjuntas.....	20
Santa Isabel.....	18	Guayanilla.....	18
Juana Diaz.....	19	Cabo Rojo.....	17
Coamo.....	14	Guayama.....	14
Lajas.....	15	Mayaguez.....	13
Arroyo.....	13	Utuado.....	12
Salinas.....	12	Cayey.....	10
Aibonito.....	10	Yabucoa.....	10
Patillas.....	9	Maunabo.....	9
Jayuya.....	9	Anasco.....	8
Barranquitas.....	6	Barros.....	5
Cidra.....	5	Caguas.....	5
Gurabo.....	5	Juncos.....	5
San Lorenzo.....	4	Maricao.....	4
Las Marias.....	4	Villalba.....	3
Aguas Buenas.....	3	San Juan.....	3
Humacao.....	2	Comerio.....	2
Rincon.....	2	Aguada.....	2
Moca.....	2	San Sebastian.....	2
Lares.....	2	Aguadilla.....	2
Piedras.....	1	Island of Vieques.....	1

Furthermore, for different reasons I have made several inspection trips, mostly on horseback, to the following places:

District of "Coto Laurel," of Ponce (for malaria); "Quebrada del Agua," of Guayanilla (for typhoid fever); "Anon," of Ponce (for influenza); "Poblado del Rosario," of San German (to visit hospital for influenza cases); district of "Pedro Garcia," of Coamo (to inspect bakeries); and districts of "Plata" and "Lajas Arriba," of Lajas (for varioloid).

Also a three-day trip throughout the island in the company of Dr. Haydon, director of sanitation of Santo Domingo, to show him the sanitary work done by the department since its establishment in the island.

REPORT OF THE FOOD AND DRUG INSPECTOR OF THE NORTHERN DISTRICT.

By Mr. ANDRÉS RODRIGUEZ.

Since the month of November, 1918, I have been working in the pharmacy of the department, which has been established in the quarantine hospital.

I made two visits of inspection to each of the towns of my district, having performed the work indicated below:

Articles confiscated and destroyed because they were unfit for consumption.

	Pounds.		Pounds.
Pickled herring.....	10,450	Cheese.....	20
Codfish.....	7,575	Beans.....	200
Wheat flour.....	231	"Pelican" crackers.....	1,200
Corn meal.....	80,141		
Cakes.....	200	Total.....	100,367
Peas.....	350	Canned foodstuffs.....	15

Drugs destroyed because of there being contaminated by insects.

	Grams.		Grams.
Gentian powder.....	1,565	Stomach plaster.....	200
Flowers of camomile.....	300	Viper root.....	400
Uva ursi leaves.....	300	Eucalyptus leaves.....	400
Gentian root.....	125		
Common alkanet.....	400	Total.....	4,990
Flowers of arnica.....	1,300		

I suspended provisionally the sale of the following articles:

	Pounds.
Rice.....	20,200
Beans.....	45,000
Corn meal.....	400

Total of articles provisionally confiscated for the purpose of submitting them to different proceedings of cleansing, such as selection, etc..... 65,600

Eighty-nine pharmacies were inspected, notifying the owner in each case of deficiencies noted, and upon reinspection thereof I noted that the greater part of such deficiencies had been corrected.

Samples submitted to the chemical laboratory for analysis.

Drugs.....	15
Milk.....	4
Powdered coffee.....	1
Vinegar.....	1
Total.....	21

Eighty-nine pharmacies were inspected, notifying the owner in each case of deficiencies noted, and upon reinspection thereof I noted that the greater part of such deficiencies had been corrected.

Complaints filed in court.

Adulteration of drugs.....	8
Adulteration of milk.....	4
Total.....	12

The following inspections were made in company with the medical inspector of the northern district:

Slaughterhouses.....	48	Hotels and inns.....	110
Meat shops.....	65	Cafes and cafetines.....	88
Grocery stores.....	594	Milk depots.....	61
Bakeries.....	62	Schools.....	40
Warehouses.....	92		
Fruit stands.....	202	Total.....	1,382

The appropriation for traveling expenses having become exhausted, we were prevented from effecting a few inspection trips, a fact which greatly crippled the work.

REPORT OF THE FOOD AND DRUGS INSPECTOR OF THE NORTHERN DISTRICT.

By Mr. CARLOS GACIA DE QUEVEDO.

Having been appointed to my position as food and drug inspector for San Juan, Rio Piedras, Catano, and Bayamon on February 6, 1919, this report is confined to my work for the last five months of the fiscal year ending June 30, 1919.

During the past five months I inspected all the establishments in my district engaged in the sale of foodstuffs or drugs, while at the same time I had to substitute the inspector for the northern district, who was on leave of absence for a month. I left on an inspection trip to the towns of Caguas, Juncos, Humacao, San Lorenzo, Aguas Buenas, Curabo, Aguadilla, Aguada, Isabela, Quebradillas, San Sebastian, Moca, Lares, Rincon, Carolina, Morovis, and Vega Baja.

Complaints filed in court.

Municipal court of San Juan: Adulteration of drugs.....	1
District court of San Juan: Adulteration of milk.....	1
Total.....	2

Samples sent to the biological laboratory for analysis.

Water.....	3
Milk.....	4
Total.....	7

Samples sent to the chemical laboratory for analysis.

Water.....	4	Soda lemonades.....	4
Ointments and medicinal oils.....	4	Orange sirup.....	1
Rice.....	31	Milk.....	11
Vegetable color.....	3	Medicinal tinctures.....	20
Drugs.....	2	Vinegar.....	4
Beans.....	3	Total.....	110
Powdered coffee.....	21		
Ices.....	2		

Articles confiscated and destroyed because of being unfit for human consumption.

Pickled herring.....	pounds	12,500	Mortadella.....	pounds	700
Rice.....	do	1,300	Red pepper.....	do	1,800
Codfish.....	do	1,555	Patagras cheese.....	do	790
Onions.....	do	400	Salmon.....	do	220
Barley.....	do	300	Bacon.....	do	25
Beef.....	do	55	Cow's milk.....	liters	98
Pork.....	do	3	Condensed milk.....	cans	2,202
Pork chops.....	do	75	Evaporated milk.....	do	510
Cod-liver oil emulsion.....	do	17	Sardines.....	do	110
Corn meal.....	do	1,900	Bean soup.....	do	25
Wheat flour.....	do	600	Salmon.....	do	49
Macarela.....	do	4,600	Soda crackers.....	do	4

REPORT OF THE FOOD AND DRUGS INSPECTOR OF THE SOUTHERN DISTRICT.

By Mr. BRAU GONZÁLEZ.

Inspection of—		Inspection of—Continued	
Warehouses and stores.....	1,615	Hotels.....	7
Bakeries.....	215	Ambulatory refreshment booths.....	57
Pharmacies.....	107	Meat shops.....	30
Milk depots and transportation of milk.....	378	Soda-water factories.....	10
Cafetines.....	88	Commission houses.....	40
Eating houses.....	93	Corn-flour mills.....	13
Confectionery shops.....	23	Hospitals.....	9
Coffee-roasting mills.....	6	Slaughterhouses.....	1
Ice plants.....	3	Fruit stands.....	2
Soup-paste factories.....	14	Schools.....	4
General markets.....	43	Dairies.....	2
Chocolate factories.....	2	Ice-cream factories.....	1
Piers.....	17	Total.....	2,780

SAMPLES FORWARDED TO THE LABORATORY.

Ham.....	2	Butter.....	1
Codfish.....	1	Rice.....	1
Drugs.....	2	One each of preserved foodstuffs, powdered coffee, and roasted coffee.....	3
Cow's milk.....	26	Soup paste.....	1
Corn meal.....	1	Vegetable gravy.....	2
Olive oil.....	7	Potatoes.....	1
Evaporated milk.....	1	Total.....	60
Wheat flour.....	2		
Soda water.....	8		

ARTICLES CONDEMNED AND DESTROYED.

Pickled herring.....	pounds..	47,728	Condensed milk.....	pounds..	1,463
Smoked herring.....	do.....	13,545	Evaporated milk.....	do.....	778
Rice.....	do.....	9,862	Cow's milk.....	quarts..	94
Candy.....	do.....	71	"Menudos de cerdo".....	pounds..	475
Codfish.....	do.....	878	Lard.....	do.....	600
Onions.....	do.....	400	Peanut butter.....	do.....	62
Miscellaneous canned foodstuffs (sardines, salmon, etc.).....	pounds..	2,179	Butter.....	do.....	68
Pork sausages.....	do.....	26	Mortadella.....	do.....	279
Sweets.....	do.....	294	Potatoes.....	do.....	49,078
Crackers.....	do.....	12,095	Soup pastes.....	do.....	100
Beans.....	do.....	4,300	Bread.....	do.....	300
Corn meal.....	do.....	5,520	Cheese.....	do.....	221
Wheat flour.....	do.....	24,000	Salmon.....	do.....	200
Figs.....	do.....	120	Bologna sausage.....	do.....	1,120
Ham.....	do.....	596	Total.....	do.....	177,073

ARTICLES OF FOOD DENATURED.

Beans.....	pounds..	21,700	Crackers.....	pounds..	3,596
Corn meal.....	do.....	38,420	Lard.....	do.....	632
Flour of barley.....	do.....	280	Total.....	do.....	65,826
Rice.....	do.....	1,000			

DRUGS CONFISCATED AND DESTROYED.

Colechicum.....	grams..	300	Rhubarb.....	grams..	1,000
Aconite.....	do.....	300	Total.....	do.....	4,200
Anise (seeds).....	do.....	500			
Jalapa.....	do.....	2,100			

PATENT MEDICINES DESTROYED.

Hoffmann's water.....	bottles..	330	Distilled water.....	gallons..	5
Santonias.....	cases..	11			

DEFICIENCIES REPORTED.

Six hundred and sixty-one establishments were notified to correct sanitary deficiencies existing therein.

COMPLAINTS FILED IN COURT.

District court of Ponce: Adulterated milk.....	5
District court of Mayaguez: Adulteration of milk.....	1
District court of Arecibo: Adulteration of milk.....	1
District court of Arecibo: Violation of Regulation No. 53.....	1
District court of Humacao: Adulteration of milk.....	1
District court of Guayama: Adulteration of milk.....	1
District court of Guayama: Violation of Regulation No. 53.....	4
District court of Guayama: Violation of Regulation No. 30.....	1
Municipal court of Ponce: Violation of Regulation No. 29.....	1
Municipal court of Ponce: Violation of Regulation No. 53.....	3
Municipal court of Ponce: Violation of Regulation No. 31.....	7
Municipal court of Adjuntas: Violation of Regulation No. 53.....	1
Total.....	32

REPORT OF THE VETERINARY INSPECTOR, PONCE.

The following animals, after proper inspection, were slaughtered in the Ponce slaughterhouse:

Oxen.....	326	Cows.....	826
Young bulls and calves.....	3,676	Hogs.....	3,078
Goats.....	704	Sheep.....	722

Hogs incinerated on account of suffering from cysticercosis, 58.

Heads destroyed because of being affected with tuber in the cervical ganglions, 51.

Livers of cattle destroyed because of being affected with distomiasis, 129.

Lungs of pigs destroyed because of being affected with strongylosis, 205.

Lungs of bovine cattle, 48.

Animals incinerated because of suffering from transmissible diseases: 1 young bull with anthrax, 1 ox with acinomicosis, 1 ox with malignant tumors, 2 young bulls which died of asphyxia before reaching the slaughterhouse.

We have for years been fighting on this side of the island against the diseases known as anthrax and symptomatic carbuncle, which have made their appearance in some places with such virulence that in the estates of "Luciana" and "Cristina," in Juana Diaz, there was a time when 40 animals died within a week. Many precautions have been taken to prevent the spread of these diseases, the owners of cattle directing the

vaccination of their animals in due time to avoid the heavy losses caused by the terrible plague.

On the south coast, jurisdictions of Ponce, Juana Diaz, Santa Isabel, and Guayanilla, about 6,000 heads of cattle have been vaccinated against anthrax and about 1,000 against symptomatic carbuncle.

Disease in bovine cattle known as "ranilla." About 25 cases have appeared in the jurisdictions of Coamo and Juana Diaz, only 10 having been cured by means of a solution of atoxyl in the young animal and during the early stage of the disease. However, the results of the injection on old animals, which are also susceptible to the disease, is not entirely satisfactory, as very few answer to treatment. This is a disease to which great attention should be given, inasmuch as some cases appear with great virulence, there having been estates where 10 cases one after another, with intervals of two days, have occurred.

Glanders: From February to June 30, 28 horses in the towns of Mayaguez, San German, Ponce, Salinas, Guayama, Arroyo, and Adjuntas, presenting symptoms of glanders were quarantined, not counting those that were killed with the consent of owners, the symptoms being so distinct as not to allow any doubt that the animals were suffering from the disease. The majority of these cases had to be seized by the sanitary inspectors because of failure on the part of owners to report them in accordance with existing regulations.

Stables: The stables have greatly diminished in number throughout the district, particularly so in Ponce where at present only 25 stables exist, the greater part of them having been built in the outskirts of the town. Many of them have been closed because of sanitary deficiencies and some were closed because they were no longer of any use to their owners.

Epizootic lymphangitis: Many are the cases noted of this disease among horses and mules, inasmuch as 45 cases of the disease were inspected during the year in districts near Ponce. Many animals have been cured, while very few had to be killed to prevent contagion to other animals.

Rabies: Only two cases were reported in this city during this year, the animals having been killed in both cases.

Vermineous bronchitis (in young calves): This is one of the principal diseases which we have to combat in dairies during the dry season, as there have been cases where in one stable from 8 to 12 per cent of the animals were suffering from the disease, which as a general rule is mortal. Energetic measures have immediately been taken by isolating all animals affected and throwing lime on the ground to prevent the propagation of the disease, which is transmitted by means of food and water.

Texas Fever: Despite the fact that this disease is endemic in this country, very few animals died of Texas fever. The cattle owners are protecting their cattle through the construction of immersion tanks for the animals, using the arsenic solution recommended by the Department of Agriculture of Washington for the destruction of ticks.

INSANE ASYLUM.

At the beginning of the last or nineteenth century (1810) a royal decree was published in the Official Gazette of Madrid, establishing a charitable asylum in the city of San Juan, which did not become a positive fact because of the dilatory proceedings of the complicated and obstructing administration of the period.

Twelve years later (1822) a board of charities was created, which in coming to life proclaimed satisfactory results. If the line of its first endeavors had been followed, it would undoubtedly have been a highly important success.

Later, in 1840, the Government of Porto Rico took charge of the construction of a building for confinement and charitable purposes, which building, it may and should be said, constitutes the basis of the present insane asylum. The main part of the building was completed in 1844, and the government of the island desired to inaugurate the same on the day of the celebration of the patron saint of the queen, Dona Isabel II, to which end on the 19th of November 23 insane persons, 15 men and 8 women, were placed in the institution. On the front of the building may be read an inscription commemorating the fact.

In 1848 the asylum commenced to serve the most inconsistent purposes, finally becoming a home where the most scandalous promiscuity reigned. Highly immoral men and women, helpless orphan children of both sexes; insanity in all its aspects and modalities; maniacs and melancholies; persecuted and persecutors; megalomaniacs and hypochondriacs; epileptics and idiots, all led a common life, the most frightful disorder holding sway in the midst of a régime of terror and cruelty where even the whip was resorted to, to such an extent that the unhappy lunatics far from curing or improving became worse or died before their time from suffering and torture more than from mental disease.

About the year 1861 a two-story masonry building for the exclusive use of male patients was built to the east of the main building, contiguous thereto.

In 1872 boys and girls, insane men and women, were classified and isolated in separate convenient wards.

From that date the asylum for the insane has been going through a period of intense inertia under the influence of routine. But in 1892 the authorities turned their eyes toward the institution and established therein improvements and procedure leading it into more modern lines.

In 1898, as a consequence of the bombardment by the American squadron on March 12, part of the buildings were destroyed. Vestiges of the incident are still observable.

In 1899 two new wards were built and a good water supply, perfect plumbing installations, the modernizing of latrines, electric lighting, and other hygienic improvements connected with permanent illumination and ventilation were established. Corporal punishment was abolished, gymnastic exercises were instituted, and life was made more agreeable by means of music, dancing, and other entertainments proper for this class of patients.

During this same year the offices of medical director and physician-alienist were consolidated.

In view of the insufficiency of the wards used for the asylum for the insane, and because of the daily growth of the number of applications for admission, the board of charities in August of the aforesaid year directed the transfer of the boys to the building in Santurce known as the instituto, because it had served as one for secondary education, and of the girls to the building which had been occupied by the Mothers of the Sacred Heart, also in Santurce, where they still exist under the name of girls' charity school.

Hence, in February, 1900, the insular insane asylum was integrated and perfectly differentiated. Since that date great improvements have been made along all lines. Thus we have that in 1906 the number of inmates was 243, a figure which increased progressively until we now find in the institution 248 lunatic men and 249 women, or 477 in all, solicitously attended and cared for by 76 male and female employees.

At present the patients are well lodged and the infirmaries well supplied and attended by male and female nurses. There is a good operating room directed by personnel of recognized ability (three medical professors who make the institution if not a model of its class, at least a representative of the adaptation of buildings to the requirements of modern psychiatrics).

INMATES.

The total number of inmates of both sexes on June 30, 1918, was 473 and the number on the same date of the present year was 475, showing an increase of 2 patients during this period as compared with the previous one.

NEW ADMISSIONS.

The number of patients of both sexes admitted during the past fiscal year was 269, showing an increase of 12 in comparison with the previous year.

The number of patients discharged as cured during the period covered by this report was 52 men and 34 women, making a total of 86.

The inmates who left the establishment, without completing their cure and on request of their relatives, numbered 46 men and 20 women, making a total of 66. The majority of these inmates were pay patients, and many patients have been taken from the institution because their relatives did not desire to leave them there as poor patients though it was difficult for said relatives to pay for them.

SICKNESS.

During the year we had to lament several cases of dengue and later of the terrible influenza, both of which caused some victims, but fortunately we controlled the situation by means of the quarantine ordered by the department of health to prevent such inroads as might have been caused by the aforesaid diseases in an establishment where over 500 persons are sheltered and which does not meet the hygienic conditions of capacity, etc., required by science. Dyentery also made its appearance in the form of a veritable epidemic.

The diseases causing the greatest number of deaths have been: Enteritis, 54; dysentery, 8; nervous breakdown, 8, and pulmonary tuberculosis, this last disease reaching a percentage of 11.3 of the total mortality during the year. This fact causes sadness and worry and seriously demands the adoption of measures to prevent the spread of contagion among the inmates by the dread disease. I must repeat the statements contained in my report of last year on the same matter, and I consider it more necessary

each day to take radical measures if we desire to avoid the serious and frightful problem which the terrible plague may present to us.

Surgical instruments costing over \$400 were acquired for the asylum's operating room, and it is necessary to make further purchases along this line so as to have in time a surgical hall equipped with the required efficiency.

BUDGET.

The tables of figures accompanying this report, which indicate the amount of expenses incurred during the past fiscal year, contain detailed information of the expenses incurred by each patient during the year. Some appropriations have been increased in the new appropriation act, among others that for subsistence, which from 20 cents per capita a day has been increased to 30 cents. This represents an increase of 50 per cent, which in normal times would be plenty for subsistence expenses, but which at present, due to the fact that articles of consumption have increased in price in many cases as much as 100 per cent and in no case less than 60 per cent, the amount appropriated is somewhat low, and it is necessary to practice great economic equilibrium to harmonize receipts and expenditures.

REPAIRS AND IMPROVEMENTS.

The changes and improvements which we have been able to make during the fiscal year just closed were very small because of the absolute lack of means to carry them out, notwithstanding that they are works of great necessity and utility. The new budget, however, contains certain appropriations which though not wholly, will allow the introduction of some changes and the carrying out of repairs and necessary works.

It only remains to be said that the most deficient and hardest labor of all those done by the institution is the washing of clothing. This is due to the great quantity of clothes and the small personnel available. To remedy this deficiency the installation of a sanitary electric laundry was requested last year. The proper steps were taken, the order placed in accordance with regular procedure, but because of unforeseen circumstances it has been as yet impossible to obtain the machinery. I desire to insist on the convenience of said installation, which would save time and improve the laundering of clothing to the extent that it could be disinfected by boiling in order to prevent the spread of certain diseases in which clothing may act as conveyor.

Age, color, civil condition, and religion of patients remaining in the insane asylum on June 30, 1919.

	Men.	Women.	Total.
10 to 20 years.....	12	10	22
21 to 30 years.....	68	63	131
31 to 40 years.....	72	76	148
41 to 50 years.....	44	58	102
51 to 60 years.....	24	33	57
61 to 70 years.....	5	7	12
71 to 80 years.....	1	2	3
Total.....	226	249	475
White.....	146	155	301
Colored.....	80	94	174
Total.....	226	249	475
Single.....	150	135	285
Married.....	66	78	144
Widowed.....	5	25	30
Divorced.....	1	2	3
Unknown.....	4	9	13
Total.....	226	249	475
Catholic.....	179	214	393
Spiritualist.....	8	9	17
Protestant.....	10	7	17
Evangelist.....	1	.....	1
Presbyterian.....	.....	1	1
None.....	9	2	11
Unknown.....	19	16	35
Total.....	226	249	475

Comparative table showing the number of patients admitted to the insane asylum during the fiscal years 1917-18 and 1918-19.

Months.	1917-18			1918-19		
	Men.	Women.	Total.	Men.	Women.	Total.
July.....	7	15	22	10	5	15
August.....	42	20	62	17	8	25
September.....	10	1	11	12	8	20
October.....	5	4	9	15	11	26
November.....	7	6	13	7	5	12
December.....	6	5	11	12	1	13
January.....	8	13	21	17	4	21
February.....	9	7	16	6	7	13
March.....	14	5	19	6	27	33
April.....	25	1	26	10	20	30
May.....	16	6	22	15	8	23
June.....	18	7	25	26	12	38
Total.....	167	90	257	153	116	269

Table showing patients discharged each month and the cause therefor during the fiscal year 1918-19.

Months.	Male.				Female.			
	Cured.	Discharged upon request.	Died.	Total.	Cured.	Discharged upon request.	Died.	Total.
July.....	2	5	10	17	1	1	3	5
August.....	10	4	9	23	4	1	3	8
September.....	1	7	5	13	2	2	2	6
October.....	3	4	10	17	3	1	3	7
November.....	9	4	4	17	2	3	2	7
December.....	3	6	9	18	3	2	2	7
January.....	3	1	4	8	3	11	14	28
February.....	2	5	3	10	2	7	9	18
March.....	3	3	4	10	5	8	13	26
April.....	6	6	3	15	2	1	5	8
May.....	2	2	4	8	2	3	6	11
June.....	8	5	2	15	11	1	2	14
Total.....	52	46	64	162	34	20	51	105

Diagnoses of mental diseases of patients discharged and cause of discharge during the fiscal year 1918-19.

Diagnoses.	Male.				Female.			
	Cured.	Discharged upon request.	Died.	Total.	Cured.	Discharged upon request.	Died.	Total.
Amenia.....		2	1	3				
Confusional insanity.....		2		2	2		1	3
Dementia protracta.....	6	8	5	19	1	1	9	11
Syphilitic dementia.....	4	3	3	10				
Terminal dementia.....							1	1
Dipsomania.....		1		1				
Idiocy.....		1		1				
Imbecility.....	3	1	4	8			2	2
Alcoholic insanity.....	6	3	14	23	2	1	1	4
Epileptic insanity.....	2	1	11	14			2	2
Hysterical insanity.....					2	1	1	4
Periodical insanity.....	3	2	4	9	4	1	3	8
Puerperal insanity.....					1	1	1	3
Manic depressive insanity.....	7	5	7	19	17	4	16	37
Senile insanity.....		1		1		1	4	5
Temporary insanity.....	1			1				
Traumatic insanity.....	1		1	2				
Toxic insanity.....	4			4		1		1
Manic.....			3	3				
Acute manic.....	5	3	2	10				
Subacute manic.....	4	1	1	6				
Melancholia.....		2	1	3	1			1
Paranoides.....		8	4	12			5	5
Involuntional psychosis.....					4	8	5	17
Psychosis due to uncinariasis.....	5	2	3	10				
Psychiastemia.....						1		1
Not insane.....	1			1				
Total.....	52	46	64	162	34	20	51	105

Occupations of patients remaining in the insane asylum on June 30, 1919.

Occupation.	Men.	Women.	Total.	Occupation.	Men.	Women.	Total.
Farmer.....	28	2	30	Messenger.....	2		2
Mason.....	3		3	Physician.....	2		2
Barber.....	3		3	Mechanic.....	4		4
Unskilled laborer.....	16		16	Teacher.....		3	3
Carpenter.....	7		7	Dry nurse.....		1	1
Merchant.....	11		11	Clerk.....	1		1
Foreman.....	1		1	Skilled laborer.....	1		1
Cook.....		4	4	Fisherman.....	2		2
Seamstress.....		4	4	Baker.....	1		1
Domestic.....		204	204	Painter.....	1		1
Employee.....	2	3	5	Flat ironer.....		3	3
Student.....	2	2	4	Tailor.....	1		1
Stenographer.....	1		1	Soldier.....	5		5
Fireman.....	1		1	Secton.....	1		1
Ironworker.....	1		1	Servant.....		3	3
Printer.....	2		2	Cigar maker.....	15		15
Industrial.....	7		7	Shoemaker.....	4		4
Engineer.....	2		2	Without occupation.....	14	7	21
Day laborer.....	57		57	Unknown.....	11	11	22
Farm laborer.....	15		15				
Laundress.....		4	4	Total.....	226	249	475
Sailor.....	2		2				

Age of patients discharged and cause of discharge during the fiscal year 1918-19.

Age.	Male.				Female.			
	Cured.	Discharged upon request.	Died.	Total.	Cured.	Discharged upon request.	Died.	Total.
10 to 20 years.....	7	6		13	5	2	1	8
21 to 30 years.....	20	17	25	62	12	4	10	26
31 to 40 years.....	14	13	21	48	5	4	17	26
41 to 50 years.....	4	6	13	23	8	4	13	25
51 to 60 years.....	6	3	4	13	4	3	8	15
61 to 70 years.....	1	1		2		2	1	3
71 to 80 years.....			1	1		1	1	2
Total.....	52	46	64	162	34	20	51	105

Diseases which caused the death of patients according to psychoses during the fiscal year 1918-19.

	Amen- tia.		Mental con- fu- sion.		De- men- tia preco- x.		Syph- ilic de- men- tia.		Termi- nal de- men- tia.		Imbe- cility.		Alco- holic in- sanity.		Epilep- tic in- sanity.		Hys- teric in- sanity.		Period- ical in- sanity.		Puer- peral in- sanity.		Manic depres- sive in- sanity.		Senile in- sanity.		Trau- matic in- sanity.		Para- nolia.		Involun- tional psy- cho- sias.		Psycho- sias due to un- clarifi- cations.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
General paresis																																					
Asy tobia																																					
Bronchitis																																					
Nervous break- down																																					
Dysentery																																					
Emphysema																																					
Enteritis																																					
Epilepsy																																					
Cerebral hemor- rhage																																					
Dropsy																																					
Influenza																																					
Nephritis																																					
General paresis																																					
Pellagra																																					
Pneumonia																																					
Syphilis																																					
Pulmonary tu- berculosis																																					
Unclear cases																																					
Typhoid fever																																					
Total	1		1	5	9	3				1	4	2	14	1	11	2		1	4	3		1	14	16		4	1		4	5		5	3		64	51	

BOYS' CHARITY SCHOOL.

During the past fiscal year, 1918-19, the admission to, and discharge of inmates from, the institution were as follows:

Inmates on June 30, 1918.....	276
Admitted during the year.....	55
Total.....	351
Discharged.....	50
Inmates on June 30, 1919.....	281
Of this number there are whites.....	209
And colored.....	72
Total.....	281

The classification of inmates according to education is as follows:

Did not know how to read.....	19
Knew how to read.....	16
Knew how to read and write.....	20
Total.....	55

The 281 inmates of the institution on June 30, 1919, are classified as follows as to age:

7 years old.....	6	16 years old.....	20
8 years old.....	7	17 years old.....	18
9 years old.....	13	18 years old.....	13
10 years old.....	36	19 years old.....	2
11 years old.....	28	20 years old.....	1
12 years old.....	26	21 years old.....	1
13 years old.....	35	Total.....	281
14 years old.....	43		
15 years old.....	32		

The following table shows the classification by grades of pupils who attended the different classes, and the number examined, promoted, and not promoted:

Enrollments.

	Enrolled.	Examined.	Promoted.	Not promoted.
First-grade enrollments during the year.....	34	34	34	
At the end of the year.....	6			6
Second grade.....	33	33	30	3
Third grade.....	55	55	51	4
Fourth grade.....	50	50	47	3
Fifth grade.....	40	40	31	9
Sixth grade.....	16	16	13	3
Seventh grade.....	25	25	25	
Eighth grade.....	18	18	18	
Total.....	277	271	249	28

Percentage of promotions, 91.68.

Four pupils attended the San Juan High School.

The standing of the 50 inmates discharged during the fiscal year was as follows:

Graduates of the eighth grade.....	8	Taking the third grade.....	3
Taking the eighth grade.....	4	Taking the second grade.....	2
Taking the seventh grade.....	6	High school graduates.....	1
Taking the sixth grade.....	10	Approved the second year of high school.....	2
Taking the fifth grade.....	5	Total.....	50
Taking the fourth grade.....	7		

Of these pupils the following table shows the number that attended the shops and obtained knowledge of:

Carpentry.....	8	Plumbing.....	8
Shoemaking.....	14	Construction.....	12

Eight of them on their discharge had quite a knowledge of music, and four had passed civil service examinations.

Manual arts: The school shops worked regularly and rendered efficient service, to wit:

SHOE SHOP.

Forty-four pupils attended daily under the full-day system and turned out the following work: new shoes, 875 pairs; repairs, 743 pairs.

The total cost of material used in the shop was \$1,529.43. Moreover, 34 pairs of shoes were repaired for as many soldiers belonging to Companies A and B of the Three hundred and seventy-third Regiment.

CARPENTER SHOP.

Thirty-seven pupils attended daily under the full-day system and did the following work:

- Extension of laundry and construction of scaffolds in same.
- Construction of closet for wardrobe.
- Repair of windows in gallery.
- Construction of two dozen mop handles.
- Construction of table for agriculture studies.
- Construction of two closets for ironers.
- Construction of one dozen washboards.
- Construction of several screens for infirmary.
- Construction of six ironing boards.
- Construction of one desk for the boys.
- Construction of two food closets.
- Construction of three boxes for flowers.
- Construction of three schoolroom blackboards.
- Construction of one hundred pairs of bars for mosquito nets.
- Construction of three wooden horses for storehouse.
- Construction of three pot holders for flowers.
- Extension of assistant superintendent's and gymnasium teacher's quarters.
- Repair and extension of closets and quarters for matron.
- Construction of two stands for athletic field.
- Construction of "bleachers" to accommodate three hundred spectators in the athletic field.

PLUMBER SHOP.

Thirty-six pupils attended this shop daily under the full-day system, and besides keeping the plumbing installations of the building in good condition during the whole year they did the following work:

- Installation of 61 showers in the mates' bath.
- Installation of four washing machines.
- Installation of nine washtubs.
- Installation of a centrifugal for drying clothes with its motor and boiler.
- Installation of water supply in four sheds, which, because of the earthquakes of October, 1918, were built in the courtyard as provisional dormitories.

Of the pupils of this shop two took and passed examinations for journeymen plumbers.

CONSTRUCTION SHOP.

Thirty pupils attended daily under the full-day system, and such pupils made a large number of repairs to the school building besides constructing—

- One cement cross, rustic.
- Seven large cement jars for flowers.
- Two reinforced concrete benches.

FUNDS.

The receipts of the insular treasury on account of sales of articles made by the inmates and of concerts given by the band were as follows:

Band concerts.....	\$370.00
Sale of articles made in the shops.....	65.99
Total.....	435.99

Said amount was credited to the following appropriations:

Recreation fund.....	\$185.00
Trust fund.....	250.99
Total.....	435.99

Table showing the number of inmates in the boys' and girls' charity schools; the number from each town, and the number that equitably pertains thereto.

Town.	Present number of inmates.		Number to which each town is entitled.		Excess.		Number that may be admitted.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Adjuntas.....	4	1	7	7			3	6
Aguada.....	1	1	4	3			3	2
Aguadilla.....	2	3	8	6			6	3
Aguaa Buenas.....		2	5	4			5	2
Albionito.....	2	3	6	5			4	2
Anasco.....		2	8	7			8	5
Arecibo.....	7	3	15	11			8	8
Arroyo.....		2	4	4			4	2
Barceloneta.....	6	3	4	3	2			
Barranquitas.....	3	3	5	4			2	1
Barros.....	1	1	5	4			4	3
Bavamon.....	14	8	9	7	5	1		
Cabo Rojo.....	1	1	7	5			6	4
Caguas.....	7	6	10	7			3	1
Camuy.....	2	1	5	4			3	3
Carolina.....	3	1	7	6			4	5
Cayey.....	4	2	7	6			3	4
Celba.....	2	2	3	2			1	
Ciales.....	2	2	8	6				4
Cidra.....	1	1	4	3			3	2
Coamo.....	4	4	6	5			2	3
Comerio.....	3	1	4	3			1	2
Coroal.....	3		4	4			2	2
Culebra.....	1		2	2			1	2
Dorado.....	3		4	3			1	3
Fajardo.....	5	4	7	5			2	1
Guanica.....			3	3			3	3
Guayama.....	6	4	7	6			1	2
Guayanilla.....	1	1	4	3			3	2
Guaynabo.....	4	4	4	3		1		
Gurabo.....	2	4	4	3		1		
Hatillo.....	2	1	4	3			2	2
Hormigueros.....		1	3	3			3	2
Humacao.....	4	6	7	6			3	
Isabela.....		1	6	5			6	4
Jayuya.....	1	1	4	3			3	2
Juana Diaz.....	1		8	6			7	6
Juncos.....	3	1	5	4			2	3
Lajas.....	2	2	4	3			2	5
Lares.....	3	1	8	6			5	1
Las Marias.....	2	1	5	3			3	2
Las Piedras.....	1	1	4	3			3	2
Loiza.....	2	1	5	4			3	3
Luquillo.....	1	2	4	4			3	2
Manati.....	4	1	6	5			2	4
Maricao.....		1	5	5			5	4
Maunabo.....	1	1	4	3			3	2
Maaguez.....	5	5	14	10			9	5
Moca.....	1	1	6	4			5	3
Morovis.....	1	1	4	3			3	2
Naguabo.....	1		5	4			4	4
Naranjito.....	1	3	4	3			3	
Patillas.....	1		5	4			4	4
Penuelas.....	2	2	4	3			2	1
Ponce.....	26	7	22	16	4			9
Quebradillas.....	2	1	4	3			2	2
Rincon.....	1	1	4	2			3	
Rio Grande.....	4	4	5	4			1	
Sabana Grande.....	2		4	3			2	3
Rio Piedras.....	10	8	6	4	4	4		
Salinas.....		1	4	3			3	3
San German.....	4	6	8	6			4	
San Juan.....	56	34	16	10	40	24		
San Lorenzo.....	3	4	5	4			2	5
San Sebastian.....	2	2	7	5			5	3
Santa Isabel.....	1	1	4	4			3	3
Toa Alta.....	3	3	4	3			1	
Toa Baja.....	3	5	4	4		1	1	
Trujillo Alto.....	2	2	4	4			2	2
Utusio.....	5	6	11	8			6	2
Vega Alta.....		2	5	4			5	3
Vega Baja.....	2	1	6	4			4	3
Vieques.....	3	4	6	5			3	1
Villalba.....			3	2			3	1
Yabucoa.....		1	6	5			6	
Yauco.....	2	1	7	7			5	4

GIRLS' CHARITY SCHOOL.

Upon expiration of the fiscal year 1918-19, there were 179 girls in the school.

The following table shows the movement taking place in the institution during the year:

Month.	Admitted.	Discharged.	Total.	Month.	Admitted.	Discharged.	Total.
July.....			175	March.....	8	8	175
August.....	7	7	175	April.....			175
September.....	4	4	175	May.....	8	5	178
October.....	1	1	175	June.....	1		179
November.....			175	Total.....	29	25	
December.....			175	Monthly average.....			176
January.....			175				
February.....			175				

The admission of girls to the school has been regulated so that wherever possible each town is represented.

The following is a list of the towns of the island showing the number of inmates from each:

Town.	Number of pupils.	Town.	Number of pupils.
Adjuntas.....	2	Juncos.....	1
Aguada.....	1	Lajas.....	2
Aguadilla.....	3	Lares.....	1
Agua Buenas.....	2	Loiza.....	1
Albionito.....	2	Iquillo.....	1
Añasco.....	1	Manatí.....	2
Arecibo.....	3	Maricao.....	1
Arroyo.....	2	Maunabo.....	1
Barceloneta.....	3	Mayaguez.....	3
Barranquitas.....	4	Moca.....	1
Barros.....	1	Morovis.....	2
Bayamon.....	9	Naranjito.....	3
Cabo Rojo.....	1	Peñuelas.....	2
Caguas.....	6	Ponce.....	7
Camuy.....	1	Quebradillas.....	1
Carolina.....	1	Rincón.....	1
Cayey.....	2	Rio Grande.....	4
Ceiba.....	1	Rio Piedras.....	5
Ciales.....	1	Salinas.....	1
Cidra.....	1	San German.....	5
Coamo.....	2	San Juan.....	30
Comerio.....	1	San Lorenzo.....	3
Corozal.....	1	San Sebastián.....	2
Fajardo.....	5	Toa Alta.....	3
Guayama.....	1	Toa Baja.....	4
Guayanilla.....	1	Trujillo Alto.....	2
Guaynabo.....	4	Utao.....	5
Gurabo.....	4	Vega Alta.....	2
Hatillo.....	1	Vega Baja.....	1
Hormigueros.....	1	Vieques.....	4
Humacao.....	7	Yabucoa.....	1
Isabela.....	1	Total.....	179
Jayuya.....	1		

The classification of pupils by ages, is as follows:

7 years old.....	10	14 years old.....	18
8 years old.....	10	15 years old.....	20
9 years old.....	12	16 years old.....	10
10 years old.....	16	17 years old.....	7
11 years old.....	23	18 years old.....	2
12 years old.....	30	Total.....	179
13 years old.....	21		

Otherwise classified, it may be stated that there are:

Orphans.....	18
Bereft of father.....	88
Have both father and mother.....	10
Total.....	179

The health of inmates has been good as a rule. The admissions to the infirmary were 132 patients only during the year, and it is to be noted that during the influenza epidemic, 58 cases of the disease occurred in the school, no death being recorded, either in that period or in the rest of the year.

The earthquake of October 11, 1918, caused damages to the building to such an extent that it was impossible to continue educational work in the classrooms, this work having been suspended for a period of six months. Despite the fact, it may be stated that the results obtained in the school year just ended have been brilliant. Promotions in almost all the grades reached 100 per cent. The 16 girls who were taking the eighth grade obtained their diplomas with satisfactory notes.

Enrollments in each grade were as follows:

First grade.....	14	Fifth grade.....	23
Second grade.....	27	Sixth grade.....	23
Third grade.....	25	Seventh grade.....	27
Fourth grade.....	20	Eighth grade.....	16

The attendance at sewing, embroidery, drawnwork and crochet classes has been excellent. An average of 70 girls of the sixth, seventh and eighth grades attended the domestic science classes.

Attention has been paid to physical culture of the inmates; two or three days a week basket ball and other similar games tending to physically develop the inmates take place.

The sum of \$248 were the receipts in the insular treasury for the proceeds of the sale of articles made by the inmates.

BLIND ASYLUM.

The following table shows the movement of patients in the blind asylum during the fiscal year just ended:

	Curable.	Incurable.	Total.
Number of patients June 30, 1918.....	57	36	93
Admitted during the fiscal year 1918-19.....	46	11	57
Total.....	103	47	150
Number of patients discharged.....			113
Remaining on June 30, 1919.....			37
Causes determining discharges:			
Cured.....			41
Upon request (not cured).....			66
Died.....			6
Total.....			113

Thirty-one operations were performed, 17 on male patients and 14 on women. There were 69 cases of common diseases recorded, only 6 deaths having been recorded during the fiscal year.

The movement which has taken place in this institution will appear to be small at first sight; but the catastrophe of October 11, 1918, which caused a complete disturbance is well known to all. The building was left full of cracks and the whole of the south side of it comprising the rooms used by male patients and a part of the east side where the operating room was located, as well as that side where the sick inmates were quartered, became uninhabitable. Practically two-thirds of the building had to be abandoned.

As yet but a part of the building only can be used, as the repair work which is being done therein has not been completed, and it has been impossible during the months elapsed after the earthquake to treat the number of patients that was usually treated in the institution.

Diagnoses of patients admitted to the asylum, curable and incurable, during the fiscal year 1918-19.

	Male.	Female.	Children.	Total.
Pupillary atrophy.....	1			1
Progressive atrophy.....	1			1
Papillary atrophy.....	1	1		2
Choroiditis.....	2	1		3
Suppurated choroiditis.....	1			1
Traumatic cataracts.....	4			4
Glaucoma cataracts.....	2	2		4
Senile cataracts.....	7	5		12
Conjunctivitis.....		2		2
Detachment of the retina.....		1		1
Epiphora.....		1		1
Hernia of the iris.....			1	1
Hemeralopia.....	1			1
Keratitis.....	6	2		8
Leukomas.....	2	2		4
Nephelium or nebula.....	8	1	3	12
Atrophy of the eyes.....		1		1
Ophthalmia.....			1	1
Pterygium.....	3			3
Trachoma (mild form).....			4	4
Total.....	39	19	11	69

List of admissions and discharges of patients cured and not cured, and deaths, from July 1, 1918, to June 30, 1919.

Month.	Male.	Female.	Admitted.		Discharged.		Cured.	Not cured.	Died.
			Male.	Female.	Male.	Female.			
1918.									
July.....	1		1		11	2	6	7	
August.....	10	6	12	4	15	4	6	4	
September.....	6	8	10	4	16	3	11	6	1
October.....	9	3	12		33	5	17	21	
November.....	3			3	3	1		2	2
December.....		1	1		1	1		1	1
1919.									
January.....		1	1		2	1		3	
February.....					1			1	
March.....	1		1						
April.....	1	2	3		1	2	1		2
May.....	1	1	2						
June.....	2	1	3						
Total.....	34	23	46	11	73	19	41	45	6

Operations performed in the blind asylum during the fiscal year 1918-19.

	Male.	Female.	Total.
Cataracts.....	13	3	16
Enucleation.....		5	5
Pterygium.....	4	5	9
Iridectomy.....		1	1
Total.....	17	14	31

Intercurrent diseases in the asylum.

Arteriosclerosis.....	1	Gastroenteritis.....	1
Intestinal affections.....	30	Cerebral hemorrhage.....	1
Disease of the heart.....	1	Neuralgia (various).....	1
Chronic diarrhea.....	1	Pulmonary tuberculosis.....	1
Catarrhal fever.....	15		
Gastralgia.....	10	Total.....	69

DEATHS.

Arteriosclerosis.....	1	Cerebral hemorrhage.....	1
Disease of the heart.....	1	Pulmonary tuberculosis.....	1
Chronic diarrhea.....	1		
Gastroenteritis.....	1	Total.....	6

[illegible]

Cases of transmissible diseases reported—Continued.

DEATHS.

Municipalities.	Typhoid fever.	Diphtheria.	Epidemic dysentery.	Epidemic cerebral meningitis.	Whooping cough.	Filaria.	Infantile tetanus.	Paludism.	Tuberculosis.	Leprosy.	Uncinari.	Cutaneous syphilis.	Measles.	Erysipelas.	Anthrax.	Pellagra.	Glanders.	Births.	Stillbirths.	Marriages.	General total of deaths.	Deaths from 0 to 1 year.	Deaths from 1 to 2 years.	Deaths from 2 to 5 years.
Adjuntas		1	2		1			6	6		79	5	3					658	70	358	716	82	74	100
Aguada	1	1	9					141	108		17	4	1					1,252	47	104	853	153	90	92
Aguadilla	3							3	12		17							1,465	67	604	261	66	73	55
Aguas Buenas								3	3		13							1,252	32	176	279	39	41	35
Albion								3	17		13		2					404	54	186	298	55	42	25
Arecibo	1	1	5	1	1		6	52	44		13							404	54	186	298	55	42	25
Arobo							33	137	22		127	3	1					491	75	284	730	102	59	80
Barceloneta								21	22		127	2						1,768	224	664	1,535	298	147	195
Barraquitas			3		1		4	56	30		4		1					1,267	14	86	227	60	17	15
Barros							33	7	4		3							646	56	244	488	102	47	41
Bayamon	13						7	11	14		37		3					611	9	188	471	104	34	58
Cabo Rojo	7	2	3				34	90	59		16	1						1,523	115	852	816	194	62	55
Caguas		2	4		4		1	14	106		9	4	4					1,017	60	440	758	146	68	75
Canopy		1					1	2	12		16							1,844	120	766	1,177	240	119	135
Carolina			6				1	2	8		1							1,049	58	172	340	67	38	27
Cavey		3			1		11	4	51		4	1	1					841	95	368	328	93	50	35
Cayá							1	1	5		1							841	95	368	328	93	50	35
Cidra	3	1	1		2		1	2	30		23							757	17	138	189	182	28	32
Coamo			3		2		12	9	33		23	2	3					660	69	292	373	98	48	64
Comerio		1	3		4		3	12	16		9	2						757	82	292	373	98	48	64
Corozal		1			4		1	20	26		31	2	3					637	62	214	402	65	32	46
Dorado	1							1	30		4	1						715	47	228	360	73	38	49
Fajardo								14	4		4	3	1					738	17	182	303	33	25	34
Guaynabo	3	1	1		1		2	8	44		2	1						212	17	126	183	31	21	14
Guayama	1	1	4				10	12	19		2							646	48	400	421	108	37	44
Guayama	1	1	4				10	14	14		3							786	26	118	253	70	20	26
Guayama	1	2	4				2	84	55		3	4	4					326	21	220	184	41	15	26
Guayama	8				13		2	22	23		11							600	78	402	659	100	52	63
Guayama		2	1				6	22	10		14		7					355	35	170	339	62	44	44
Guayama		2	5				3	2	16		1							553	27	183	283	77	26	43
Guayama		2					3	2	11		1							727	16	174	362	71	41	55
Guayama					3		7	10	46		4	2						189	16	108	200	36	26	43
Guayama							1	5	28		7	1						681	3	276	431	51	29	43
Guayama	2		1				1	5	3		4		1					726	70	432	531	71	29	43
Guayama			7		1		1	5	3		7							681	3	276	431	51	29	43
Guayama								5	3									452	2	200	356	31	32	50

[illegible]

SUMMARY.

Total de defunciones.....	29,086					
Tanto por mil sobre la población.....	23.10	per cent.				
Total de defunciones por enfermedades transmisibles.....	6,318					
Tanto por ciento sobre mortalidad por enfermedades transmisibles.....	16.80	per cent.				
Tanto por ciento sobre mortalidad por enfermedades infantiles de 0 a 5 años.....						4.39
Relación entre la natalidad y mortalidad infantil.....						48.461
Balance entre la natalidad y la mortalidad.....						1.83
Tanto por ciento sobre nacimientos.....						

Vital statistics, 1918-19—Births, marriages, deaths, and stillbirths.

BIRTHS.

Fiscal year 1918-19.	Race.					Legitimate.				Illegitimate.				Total.
	White.	Half-breed.	Indian.	Mulatto.	Negro.	White.		Colored.		White.		Colored.		
						Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
First semester, 1918:														
July.....	4,857	253	50	1,227	171	2,175	2,031	657	622	324	329	222	200	6,590
August.....	5,440	292	77	1,186	185	2,457	2,301	641	642	354	328	236	211	7,170
September.....	3,077	384	61	797	187	1,671	1,680	570	525	279	277	188	146	5,336
October.....	3,686	277	38	799	152	1,645	1,519	501	478	261	261	168	119	4,522
November.....	2,131	178	31	607	130	1,049	1,017	363	337	242	223	119	127	3,477
December.....	2,522	281	24	550	122	1,036	996	363	284	253	237	164	174	3,507
Total.....	22,945	1,963	281	5,166	947	10,033	9,544	3,055	2,888	1,713	1,665	1,077	977	31,002
Second semester, 1918:														
January.....	2,877	165	21	661	98	1,156	1,100	350	308	283	268	138	140	3,752
February.....	2,650	155	35	762	146	1,119	977	343	366	279	275	150	175	3,681
March.....	3,332	112	19	837	183	1,422	1,300	344	356	330	280	188	177	4,486
April.....	2,479	167	31	553	123	1,057	1,566	307	283	286	280	155	120	3,353
May.....	3,241	114	27	1,047	225	1,311	1,330	519	428	302	288	203	202	4,054
June.....	1,628	119	35	452	138	685	666	308	249	144	133	122	105	2,412
Total.....	16,137	772	167	4,352	916	6,750	6,329	2,227	2,080	1,574	1,484	163	137	22,346
Total 1918-19.....	31,082	2,435	450	9,515	1,863	16,783	15,873	5,322	4,968	3,287	3,139	2,022	1,114	53,348

MARRIAGES.

Fiscal year 1918-19.	Race.		Nativity.		Age.				Previous conjugal condition.				Total.								
	White.		Colored.		Native.		Foreign.		Under 20 years.		20 to 30 years.			Over 30 years.		Single.		Widowed.		Divorced.	
	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.		Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.
	1,522	1,517	440	443	1,957	1,959	5	3	51	380	1,541	1,373	370	209	1,835	1,003	97	43	30	10	3,042
First semester, 1918:																					
July.....																					

August.....	1,487	1,499	387	384	1,870	1,871	9	3	58	301	1,863	1,282	434	281	1,700	1,918	91	41	27	15	2,748
September.....	1,057	1,083	621	40	2,160	2,175	9	3	40	271	1,164	1,321	684	586	2,080	2,086	16	68	32	24	4,386
October.....	1,594	1,635	367	301	1,838	1,846	8	5	28	438	1,387	1,362	266	146	1,813	1,901	89	59	24	20	3,972
November.....	424	430	67	67	485	488	8	5	24	121	301	204	163	78	439	461	37	27	12	8	1,976
December.....																					
Total.....	6,817	6,906	1,872	1,723	8,060	8,076	29	13	224	1,494	5,648	5,769	2,807	1,436	8,063	8,330	478	268	148	91	17,378
Second semester, 1918:																					
January.....	437	446	84	76	513	519	8	2	20	180	383	2,34	148	67	454	476	56	14	11	8	1,042
February.....	458	467	113	110	573	577	4	.....	23	180	409	341	139	56	504	555	57	19	16	3	1,154
March.....	587	571	131	127	60	67	8	1	24	208	475	404	199	83	610	664	76	27	13	7	1,36
April.....	576	575	144	135	706	709	4	1	20	232	525	421	165	57	674	675	74	31	12	4	1,420
May.....	535	545	135	126	664	669	6	1	21	115	494	421	155	56	582	644	76	13	13	7	1,340
June.....	308	303	50	55	351	353	7	5	15	193	277	223	66	20	322	344	28	12	8	2	716
Total.....	2,871	2,907	663	627	3,477	3,524	37	10	129	1,088	2,533	2,104	872	342	3,06	3,381	365	122	73	31	7,078
Total, 1918-19.....	9,688	9,873	2,335	2,350	12,157	12,200	66	23	363	2,582	8,181	7,863	3,679	1,778	11,189	11,711	843	390	221	122	24,446

STILLBIRTHS.¹

Fiscal year 1918-19.	Race.		Sex.		Civilcondition.		Total.	Fiscal year 1918-19.	Race.		Sex.		Civilcondition.		Total.		
	White.	Half-breed.	Male.	Fe-male.	Legiti-mate.	Illegiti-mate.			White.	Half-breed.	Male.	Fe-male.	Legiti-mate.	Illegiti-mate.			
First semester, 1918:								Second semester, 1919:									
July.....	290	106	218	178	255	141	396	January.....	270	98	212	156	232	136	368		
August.....	254	86	208	144	234	114	350	February.....	249	83	202	142	234	108	342		
September.....	210	87	169	121	190	100	290	March.....	255	113	222	146	238	129	368		
October.....	255	88	187	156	210	133	343	April.....	229	88	171	146	202	115	317		
November.....	278	91	226	143	233	137	399	May.....	215	80	170	125	205	95	296		
December.....	315	122	287	190	332	145	477	June.....	107	41	83	59	101	47	148		
Total.....	1,642	853	1,293	932	1,462	763	2,225	Total.....	1,325	513	1,064	774	1,208	630	1,838		
								Total, 1918-19.....	2,967	1,096	2,357	1,706	2,670	1,393	4,063		

¹ Not included in the grand total of births or deaths.

Vital statistics, 1918-19—Births, marriages, deaths, and stillbirths—Continued.

DEATHS.

Fiscal year 1918-19.	Age.													Nativity.										Total.		
	Under 1 year.	1 to 2 years.	2 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	Over 80 years.	Unknown.	Porto Rico.	United States.	Spain.	France.	England.	Germany.	China.	West Indies.		Other countries.	Unknown.
First semester, 1918:																										
July.....	712	364	369	176	91	135	198	160	290	228	177	142	111	88	1	3,223	2	9	1	1	1	1	3	4	1	3,241
August.....	601	325	348	183	66	123	189	126	285	207	177	144	123	68	1	2,944	1	10	1	1	1	1	4	5	1	2,986
September.....	408	230	282	141	57	94	149	108	172	164	126	124	76	58	1	2,118	2	1	1	1	1	1	2	2	1	2,179
October.....	572	305	344	194	98	115	149	130	288	206	182	162	108	70	1	2,906	2	10	1	1	1	1	1	3	1	2,923
November.....	853	519	636	428	232	324	597	445	640	383	247	146	140	100	1	5,734	2	12	1	1	1	1	1	1	1	5,750
December.....	1,180	708	954	598	355	456	671	576	791	513	295	212	167	110	1	7,570	1	11	1	1	1	1	2	1	1	7,586
Total.....	1,366	745	2,933	1,720	899	1,237	1,953	1,545	2,466	1,701	1,204	970	725	494	1	24,545	9	57	2	2	2	1	12	18	1	24,645
Second semester, 1919:																										
January.....	783	403	440	316	108	212	360	264	432	311	262	154	136	100	1	4,327	13	13	1	1	1	1	1	1	1	4,341
February.....	626	251	256	194	100	119	187	133	302	244	200	140	103	83	1	2,946	1	9	1	1	1	1	1	1	1	2,958
March.....	530	157	192	136	86	102	171	133	278	220	190	162	140	79	1	2,570	2	3	1	1	1	1	2	2	1	2,576
April.....	480	143	174	94	55	94	164	131	217	166	143	144	109	72	1	2,183	8	8	1	1	1	1	1	1	1	2,192
May.....	544	158	163	90	51	86	152	111	175	171	151	138	92	71	1	2,146	2	4	1	1	1	1	1	1	1	2,153
June.....	208	104	87	63	25	51	73	44	97	81	80	51	40	25	1	1,064	3	3	1	1	1	1	1	1	1	1,069
Total.....	3,237	1,216	1,312	883	485	664	1,107	836	1,501	1,193	1,026	789	620	430	1	15,256	5	40	2	2	2	1	6	6	1	15,309
Total 1918-19.....	7,603	3,967	4,245	2,613	1,384	1,901	3,060	2,381	3,967	2,894	2,230	1,750	1,345	924	1	39,821	14	97	4	4	4	1	12	24	1	39,974

Fiscal year 1918-19.	Race.										Civil condition.										Sex.		Total.
	White.		Half-breed.		Indiana.		Mulatto.		Negro.		Single.		Married.		Widowed.		Divorced.		Unknown.				
	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	
First semester, 1918:																							
July.....	1,178	1,101	90	95	7	13	287	309	65	65	1,232	1,194	321	232	96	151	2	1	7	5	1,658	1,593	3,241
August.....	1,132	1,044	63	65	8	9	270	285	51	53	1,146	1,020	269	242	91	185	1	5	3	4	1,530	1,456	2,986
September.....	1,817	1,710	50	46	5	16	195	207	43	43	814	759	199	162	85	140	4	2	8	8	1,110	1,019	2,129
October.....	1,691	1,088	64	45	6	9	256	269	63	63	1,038	1,047	283	213	91	179	2	4	5	5	1,479	1,449	2,923
November.....	2,143	2,143	110	93	9	14	490	493	140	113	2,233	2,042	540	567	128	241	4	4	17	4	2,842	2,858	5,700
December.....	2,848	2,839	199	170	12	23	501	688	123	103	2,919	2,631	659	835	136	326	5	6	30	19	3,749	3,837	7,586
Total.....	9,209	9,007	576	514	46	80	2,065	2,201	522	439	9,412	8,713	2,298	2,251	627	1,228	18	18	73	37	12,418	12,247	24,665
Second semester, 1919:																							
January.....	1,656	1,592	87	133	3	8	376	348	60	80	1,029	1,479	412	451	120	225	4	1	17	3	2,182	2,159	4,341
February.....	1,963	1,084	78	66	9	6	283	257	51	51	1,991	987	237	273	99	200	2	1	5	5	1,494	1,464	2,958
March.....	995	983	56	53	7	3	214	197	63	58	927	760	290	255	108	209	1	4	9	7	1,335	1,241	2,576
April.....	820	765	49	28	8	7	224	182	60	49	815	659	261	214	79	154	1	1	5	5	1,161	1,031	2,192
May.....	800	745	52	41	6	3	217	165	43	46	831	704	225	175	86	144	1	1	11	6	1,123	1,090	2,113
June.....	413	373	29	32	3	1	98	84	28	28	436	345	107	99	21	69	2	2	2	3	571	518	1,089
Total.....	5,747	5,489	351	353	35	28	1,412	1,261	321	312	5,099	4,980	1,592	1,467	516	1,005	10	9	49	22	7,846	7,443	15,309
Total 1918-19.....	14,956	14,496	927	807	81	114	3,477	3,462	843	751	15,111	13,653	3,880	3,718	1,143	2,233	28	27	122	59	20,284	19,490	39,974

Vital statistics, 1918-19—Births, marriages, deaths, and stillbirths—Continued.

DEATHS—Continued.

Fiscal year 1918-19.	Profession or occupation.										Domicile.		Total.		
	Agriculture.		Commerce.		Industry.			Property owners.	Professions in gen-eral.	Un-known.	House-work (women).	Minors without profes-sion (both sexes).		Urban.	Rural.
	Husband-man, prop-ri-eto-rs.	Journa-men, day laborers, and farm laborers.	Proprie-tors, mer-chants.	Mer-chants' clerks.	Owners of fac-tories.	Artisans and in-dustrial laborers.	Cigar-makers.								
First semester, 1918:															
July.....	104	442	10	6	64	79	25	.....	40	20	739	1,712	834	2,407	3,241
August.....	112	407	9	3	48	71	12	.....	23	20	747	1,523	641	2,345	2,986
September.....	85	281	5	5	53	41	15	.....	17	1	540	1,118	474	1,705	2,178
October.....	106	363	3	3	57	63	21	.....	49	24	713	1,513	627	2,268	2,923
November.....	177	836	27	5	138	122	31	.....	93	3	1,516	2,708	1,551	4,199	5,750
December.....	222	1,152	18	4	97	150	16	.....	50	4	2,037	3,745	2,177	5,400	7,586
Total.....	806	3,544	78	26	457	532	120	.....	278	163	6,232	12,369	6,304	18,361	24,665
Second semester, 1919:															
January.....	145	644	17	.....	98	64	13	.....	41	26	1,183	2,110	1,015	3,326	4,341
February.....	134	433	8	2	55	57	11	.....	29	12	740	1,427	708	2,250	2,958
March.....	102	421	8	3	75	63	12	.....	21	23	744	1,101	513	2,063	2,576
April.....	93	352	11	2	61	62	7	.....	26	14	612	1,052	517	1,675	2,192
May.....	94	237	5	2	60	53	12	.....	30	25	541	1,003	534	1,619	2,153
June.....	34	134	5	.....	38	17	7	.....	14	9	281	547	236	733	1,062
Total.....	602	2,284	54	9	387	316	62	.....	161	103	4,182	7,143	3,583	11,726	15,309
Total, 1918-19.....	1,408	5,828	132	35	844	848	182	.....	439	272	10,414	19,512	9,887	30,087	39,974

Cause of death—Classification by groups.

Fiscal year 1918-19.	Cause of death—Classification by groups.														Total.
	I. General diseases.	II. Diseases of the nervous system and of the organs of special sense.	III. Diseases of the circulatory system.	IV. Diseases of the respiratory system.	V. Diseases of the digestive system.	VI. Nonvenereal diseases of the genito-urinary system and annexa.	VII. The puerperal state.	VIII. Diseases of the skin and of the cellular tissue.	IX. Diseases of the bones and of the organs of locomotion.	X. Malformation.	XI. Early infancy.	XII. Old age.	XIII. External causes.	XIV. Ill-defined diseases.	
First semester, 1918:															
July.....	915	83	154	399	915	180	42	9	1	7	203	168	27	132	3,241
August.....	890	101	137	378	790	163	33	5	.....	6	172	159	37	119	2,986
September.....	681	68	104	297	571	161	19	7	2	12	119	120	23	78	2,179
October.....	872	98	152	296	725	198	40	.....	.....	4	164	134	135	117	2,921
November.....	2,844	83	151	977	800	296	64	3	1	11	292	191	38	187	6,750
December.....	4,422	103	121	1,179	835	182	71	8	1	11	265	217	27	144	7,586
Total.....	10,614	541	803	3,420	4,639	1,076	289	37	5	51	1,125	983	283	777	21,665
Second semester, 1919:															
January.....	1,971	58	132	788	667	170	46	3	.....	13	176	218	30	89	4,341
February.....	1,103	83	119	478	535	158	35	10	1	9	180	161	23	63	2,958
March.....	831	68	147	416	456	163	25	9	.....	12	119	181	37	60	2,576
April.....	630	76	100	309	436	178	38	6	.....	9	157	152	30	51	2,192
May.....	613	74	111	253	510	143	32	6	1	11	153	153	37	56	2,153
June.....	223	37	48	135	307	77	16	2	1	6	67	59	15	28	1,083
Total.....	5,521	386	657	2,379	2,911	849	192	36	3	60	882	926	172	225	15,309
Total, 1918-19.....	16,135	927	1,466	5,799	7,550	1,945	461	73	8	111	2,007	1,915	463	1,102	39,974

Causes of death—General diseases.

Fiscal year 1918-19.	Causes of death—General diseases.																		
	19. Other epidemic diseases.	20. Purulent infection and septicaemia.	21. Glanders.	22. Anthrax.	23. Rabies.	24. Tetanus.	25. Mycosis.	26. Pellagra.	27. Beriberi.	28. Tuberculosis of the lungs.	29. Acute miliary tuberculosis.	30. Tuberculosis meningitis.	31. Abdominal tuberculosis.	32. Pott's disease.	33. White swelling.	34. Tuberculosis of other organs.	35. Dissemminated tuberculosis.	36. Rickets.	37. Syphilis.
First semester, 1918:																			
July.....		13	1	1		7				255		1	7	1		3		172	13
August.....		17				8				252		2	10			5		146	6
September.....		14				7				197			12	1		3		93	12
October.....	1	10				13		3		198	1	2	6			3		128	13
November.....	1	6				11		1		242		5	9		1	1	4	189	6
December.....	1	10		1		8		1		256	5	4	7			7		151	8
Total.....	3	70	1	2		54		5		1,400	6	14	51	2	1	22	4	879	63
Second semester, 1919:																			
January.....		9				5				210	2	1	9			1		116	10
February.....		7				10				206	1	1	9				1	125	10
March.....		10				14				228		3	6	1		5		95	8
April.....	2	14				19				208		3	3	3		4		79	8
May.....		14				16				171	1	2	8			4	1	96	4
June.....		9				6				80	1					4		47	4
Total.....	2	21				70				1,103	5	10	35	2		17	2	561	44
Total, 1918-19.....	5	133	1	2		124		5		2,503	11	24	86	4	1	39	0	1,440	107
																			3

Vital statistics, 1918-19—Births, marriages, deaths, and stillbirths—Continued.

DEATHS—Continued.

Causes of death—General diseases.																						
39. Cancer and other malignant tumors of the buccal cavity.	40. Cancer and other malignant tumors of the stomach and liver.	41. Cancer and other malignant tumors of the peritoneum, intestines and rectum.	42. Cancer and other malignant tumors of the female genital organs.	43. Cancer and other malignant tumors of the breast.	44. Cancer and other malignant tumors of the skin.	45. Cancer and other malignant tumors of the organs not specified.	46. Other tumors (tumors of the female genital organs excepted).	47. Acute articular rheumatism.	48. Chronic rheumatism and gout.	49. Scoury.	50. Diabetes.	51. Porphthalmic fever.	52. Addison's disease.	53. Leucæmia.	54. Anæmia chlorosis.	55. Other general diseases.	56. Alcoholism (acute or chronic).	57. Chronic lead poisoning.	58. Other chronic occupational poisonings.	59. Other chronic poisonings.		
Fiscal year 1918-19.																						
First semester, 1918:																						
July.....	2	10	4	15	2	7	1	3	3		4			1	171							
August.....	1	7	1	14	4	17	2	3	4	1					171	2						
September.....	1	5	1	6		9	3	3	1					1	148	1						
October.....	2	5	3	14		8	1	3	2		2				181	1						
November.....	2	4	1	14	1	9	2	1	1	1					228	1	1					
December.....	1	3		15	2	8		6	1	1	5				204							
Total.....	8	34	10	78	9	58	7	21	3	2	14			2	1,103	5	1			2		
Second semester, 1919:																						
January.....	3	9	1	3	1	11	1	4			2				158	2	1	1				
February.....	1	6	2	5		6	1	5							139	9						
March.....	6	3	14	5	1	8		4			2				125	2						
April.....	3	8	1	11		6		5	1						95	1						
May.....	2	1	10	11	1	14		5		1	2			1	76	2						
June.....	3	3		12		2		5			2	1			36							
Total.....	8	33	7	65	3	47	2	23	1	3	20	1		2	629	16	1	1				
Total, 1918-19.....	16	67	17	133	12	105	9	44	4	5	34	1		4	1,732	21	2	1		2		

Causes of death. Diseases of the nervous system and organs of special sense.

	60. Encephalitis.	61. Simple meningitis.	61a. Cerebrospinal fever.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Cerebral hemorrhage, apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General Paralysis of the Insane.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-epileptic) (5 years and over).	71. Convulsions of infants (under 5 years).	72. Chorea.	73. Neuritis and neuritis.	74. Other diseases of the nervous system.	75. Diseases of the eye and its annexa.	76. Diseases of the ear.
First semester, 1918:	3	29		1	4	21	1	10		5	5		8					1
July	1	41			3	23	2	9	1	4	0		7		1			
August		27			7	13	1	9		2	0		4					
September		21			4	22		14		5	4		5					
October	2	29			3	24		10		5	2		2					1
November	1	30		1	4	30		10		7	3	2	2	1				
December	7																	
Total	14	187		2	25	133	4	62	1	28	24	3	37	3	1	15		2
Second semester, 1918:																		
January	1	20		1	6	12		6			5		5			1		1
February		28			3	23		11			6		7					
March	2	21		1	4	25		6		1	3		4					
April	2	24		1	2	28		8			5	1	4					
May	1	19	1		5	28	1	3		3	5		8					
June		17			1	10		3			2		3					
Total	9	129	1	3	21	126	1	37		8	23	1	31			5		1
Total, 1918-19	23	316	1	5	46	259	5	99	1	36	47	4	68	3	1	20		3

Fiscal year 1918-19.

Vital statistics, 1918-19—Births, marriages, deaths, and stillbirths—Continued.

DEATHS—Continued.

Causes of death—Diseases of the circulatory and respiratory systems.

	77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries, aneurysm, etc.	82. Embolism and thrombosis.	83. Diseases of the veins (varicose, hemorrhoids, phlebitis).	84. Diseases of the lymphatic system (lymphadenitis).	85. Hemorrhage (other diseases of circulatory system).	86. Diseases of the nasal fossa.	87. Diseases of the larynx.	88. Diseases of the thyroid body.	89. Acute bronchitis.	90. Chronic bronchitis.	91. Broncho-pneumonia.	92. Pneumonia.	93. Pleurisy.	94. Pulmonary congestion, pulmonary apoplexy.	95. Gangrene of the lung.	96. Asthma.	97. Pulmonary emphysema.	98. Other diseases of the respiratory system, tuberculosis excepted.
Fiscal year 1918-19.																						
First semester, 1918:																						
July.....	1	16	92	7	35	3	.....	.....	3	.....	1	.....	119	33	87	124	13	7	.....	8	2	5
August.....	.....	24	62	6	42	3	.....	.....	.....	1	3	.....	126	25	103	99	5	3	2	6	2	3
September.....	3	19	54	5	23	.....	.....	.....	.....	1	.....	.....	71	16	41	57	6	3	.....	7	.....	1
October.....	.....	26	80	3	34	2	.....	.....	7	.....	1	.....	94	21	77	70	2	3	1	8	.....	4
November.....	1	20	78	3	37	1	.....	.....	1	.....	2	.....	210	70	265	36	4	5	2	16	5	2
December.....	3	25	61	3	27	1	.....	.....	1	.....	2	.....	261	57	365	457	4	6	2	24	1	.....
Total.....	8	130	427	27	198	6	1	.....	12	2	9	.....	881	222	933	1,205	34	26	9	67	10	15
Second semester, 1919:																						
January.....	1	24	60	4	40	2	.....	.....	1	.....	.....	.....	101	83	260	226	6	8	.....	6	4	4
February.....	6	11	66	10	25	1	.....	.....	.....	.....	3	.....	124	36	161	140	4	3	.....	5	.....	2
March.....	2	15	77	8	40	2	.....	.....	3	.....	.....	.....	125	27	107	124	9	0	.....	10	.....	1
April.....	.....	13	64	5	15	.....	.....	.....	2	.....	1	.....	98	28	78	82	4	0	.....	11	2	3
May.....	.....	24	58	7	19	2	.....	.....	.....	.....	4	.....	78	23	65	62	4	1	.....	7	3	3
June.....	1	3	24	4	11	1	.....	.....	4	.....	.....	.....	38	12	37	39	4	1	.....	3	1	.....
Total.....	10	90	349	38	150	9	.....	1	10	.....	10	.....	651	203	708	673	31	27	.....	42	12	13
Total, 1918-19.....	18	220	776	65	348	15	1	1	22	2	19	.....	1,335	431	1,646	1,878	65	53	9	111	22	28

Fiscal year 1918-19.

First semester, 1918:

Second semester, 1919:

Causes of deaths—Diseases of the digestive system

Fiscal year 1918-19.		99. Diseases of the mouth and annexa.	99a. Parotiditis.	100. Diseases of the pharynx.	101. Diseases of the esophagus.	102. Ulcer of the stomach.	103. Other diseases of the stomach (except cancer).	104. Diarrhea and enteritis (under 2 years).	105. Diarrhea and enteritis (2 years and over).	105a. Due to alcoholism.	106. Ankylostomiasis.	107. Intestinal parasites.	108. Appendicitis and typhilitis.	109. Hernia, intestinal obstruction.	110. Other diseases of the intestines.	111. Acute yellow atrophy of the liver.	112. Hydatid tumor of the liver.	113. Cirrhosis of the liver.	113a. Due to alcoholism.	114. Biliary calculi.	115. Other diseases of the liver.	116. Diseases of the spleen.	117. Simple peritonitis (non-puerperal).	118. Other diseases of the digestive system (cancer and tuberculosis excepted).	
First semester, 1918:																									
July.....	3			2	4	7	407	275	99	44	3	8	13	3	8	3	1	18	19					8	1
August.....				1	2	5	321	254	82	27	2	9	15	2	9	1	1	15	18					3	
September.....	1				3	4	218	202	60	45	1	4	4	1	4	1	1	10	17	1				3	
October.....					3	4	301	192	115	49	2	9	10	2	9	2	2	21	14					2	
November.....	2			5	1	5	323	223	131	48	1	5	14	3	14	3	3	19	9	2				4	
December.....	2			2	2	1	370	204	116	47	2	7	14	2	7	3	3	18	14				1	8	1
Total.....	8			10	5	21	1,961	1,350	613	262	11	42	70	12	12	1	1	101	91	3			1	34	2
Second semester, 1919:																									
January.....	3			4	2	2	275	199	84	27	3	4	7	2	2	2		13	11	1			1	9	
February.....	1			1	1	3	235	150	74	19	4	8	6	2	4	1	2	20	5				3	3	
March.....	3			2	2	7	163	116	94	28	2	4	5	1	1	1	1	15	9				2	2	
April.....				3	1	2	159	107	71	21	3	11	17	3	11	3	3	18	11	2			7	1	
May.....				2		5	228	136	76	14	1	3	15	3	15	3	16	6	1			1	4	2	
June.....	3					6	137	78	47	11		7	4				8	1					4	1	
Total.....	10			12	1	9	2,218	1,385	446	120	13	37	54	8	8			90	43	5			2	29	3
Total, 1918-19.....	18			22	6	30	64	3,179	2,138	1,057	3-2	79	124	20	20	1	1	191	134	8			3	63	5

Vital statistics, 1918-19—Births, marriages, deaths, and stillbirths—Continued.

DEATHS—Continued.

		Causes of death.																							
		Nonvenereal diseases of the genito-urinary organs and annexa.										The puerperal state.													
		113. Acute nephritis.	120. Bright's disease.	121. Chyluria.	122. Other diseases of the kidneys and annexa.	123. Calculi of the urinary passages.	124. Diseases of the bladder.	125. Diseases of the urethra, urinary abscess.	126. Diseases of the prostate.	127. Non-venereal diseases of the male genital organs.	128. Uterine hemorrhage (nonpuerperal).	129. Uterine tumor (non-cancerous).	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Salpin- gitis and other diseases of the female gen- ital organs.	133. Puerperal diseases of the breast (cancer ex- cepted).	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Puerperal phlebotomy, subdural death.	140. Follicular childbirth (not otherwise defined).	141. Puerperal diseases of the breast.	
Fiscal year 1918-19.																									
First semester, 1918:																									
July.....	106	67	2	2	4	1	1	3	2	18	2	1	1	1	1	1	1	6	6	27	2	2	1	1	
August.....	100	62	4	2	4	1	5	1	3	4	2	1	1	1	1	1	1	7	7	14	1	2	2	1	
September.....	109	42	2	1	3	3	3	3	3	2	2	2	3	1	1	1	2	4	1	12	1	1	1	1	
October.....	128	61	3	1	2	3	1	3	3	9	2	2	3	1	1	1	2	10	4	23	4	2	1	1	
November.....	157	31	3	2	3	2	1	1	1	1	1	1	10	1	1	1	2	8	4	37	2	2	11	1	
December.....	132	32	3	2	3	2	1	1	1	1	1	1	3	1	1	1	2	10	4	41	3	2	13	1	
Total.....	730	295	14	7	14	7	9	2	3	18	2	1	17	1	1	1	4	45	18	154	13	6	28	1	
Second semester, 1919:																									
January.....	118	34	3	3	3	2	2	1	2	7	1	1	2	1	1	1	1	5	3	28	5	1	3	1	
February.....	105	37	1	1	1	1	1	1	2	1	1	1	10	1	1	1	1	3	5	22	5	2	2	1	
March.....	107	45	1	2	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	17	2	2	2	1	
April.....	92	35	5	1	1	1	1	1	1	2	1	2	2	1	1	1	2	9	3	18	6	2	1	1	
May.....	94	36	5	1	1	1	1	1	1	1	1	1	2	1	1	1	1	4	4	23	1	1	1	1	
June.....	53	19	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	4	11	1	1	1	1	
Total.....	569	206	22	3	4	3	4	2	6	12	3	3	16	1	5	1	1	26	17	119	19	3	7	1	
Total, 1918-19.....	1,299	501	36	10	13	4	9	3	33	30	3	3	33	2	5	5	5	71	35	273	32	9	36	1	

Fiscal year 1918-19.	Cause of death.																								
	Diseases of the skin and cellular tissue.		Diseases of the bones and organs of locomotion.				Con- genital mal- formations.	Diseases of early infancy.					Old age.	External causes.											
	142. Gangrene.	143. Furuncle.	144. Acute abscess.	145. Other diseases of the skin and annexa.	149. Diseases of the tonsils (tu- berculous and rheu- matism excepted).	147. (Diseases of the joints) (tu- berculous and rheu- matism excepted).	148. Amputations.	149. Other diseases of the organs of locomotion.	150. Congenital malfor- mations.	151. Congenital debility.	152. Other causes peculiar to early infancy.	152a. Infantile tetanus.	153. Lack of care.	154. Senility.	155. Suicide by poison.	156. Suicide by strangulation.	157. Suicide by drowning.	158. Suicide by firearms.	159. Suicide by cutting or piercing instruments.	160. Suicide by jumping from high places.	161. Suicide by crushing.	162. Other suicides.	163. Poisoning by food.	164. Other acute poisonings.	165. Congestions.
First semester, 1918:																									
July.....	4	1	4	1	1	1	1	1	7	118	24	51	10	168	2	2									4
August.....	3	2	3	2	2	6	3	3	6	95	10	54	13	159		10									2
September.....	2	3	3	3	3	3	3	3	12	80	16	30	8	120	2	8	1								
October.....	1	6	1	1	1	4	1	1	4	80	13	60	3	124	1	3	2								1
November.....	3	3	1	1	1	1	1	1	11	128	17	52	5	191		8	1								2
December.....	2	1	5	1	1	1	1	1	11	133	22	72	18	217	2	5									4
Total.....	15	1	20	5	5	5	5	5	51	674	92	321	58	989	1	9	3	4							13
Second semester, 1919:																									
January.....	2	1	4	1	1	1	1	1	13	117	12	40	7	218	2	5		1							3
February.....	6	1	2	1	1	1	1	1	9	115	8	45	12	161		4									2
March.....	6	1	2	1	1	1	1	1	12	71	6	61	11	183		4									1
April.....	4	1	1	1	1	1	1	1	9	89	10	56	2	152	1	1	3								7
May.....	4	1	1	1	1	1	1	1	11	72	15	54	12	153		1									
June.....	2	1	1	1	1	1	1	1	6	34	4	23	6	59		2									4
Total.....	24	4	8	3	3	3	3	3	60	498	55	279	50	926	1	2	4	4							10
Total, 1918-19.....	39	1	5	8	8	8	8	8	111	1,152	147	600	108	1,915	2	11	3	8							23

Vital statistics, 1918-19—Births, marriages, deaths, and stillbirths—Continued.

DEATHS—Continued.

Fiscal year 1918-19.	Causes of death.																Ill-defined dis- eases.					Total.		
	External causes.																Ill-defined dis- eases.							
	167. Burns (conflagrations excepted).	168. Absorption of dele- rious gases (conflagra- tions excepted).	169. Accidental drowning.	170. Traumatism by fire- arms.	171. Traumatism by cut- ting and piercing instru- ments.	172. Traumatism by fall.	173. Traumatism in mines and quarries.	174. Traumatism by ma- chines.	175. Traumatism by other crushing (vehicles, etc.).	176. Injuries by animals.	177. Starvation.	178. Excessive cold.	179. Effects of heat.	180. Lightning.	181. Electricity (lightning excepted).	182. Homicide by firearms.	183. Homicide by cutting or piercing instruments.	184. Homicide by other means.	185. Fractures (cause not specified).	186. Other external vio- lences.	187. Ill-defined organic dis- eases.	188. Sudden death.	189. Cause of death not specified or ill-defined.	Total.
First semester, 1918:																								
July.....	4	1	5	2	1	1							1	1			2		2	1	17		115	3,211
August.....	5		6	6	6			2											3	1	12		107	2,966
September.....	1		6	2	3	1													6	1	11		67	2,179
October.....	2	1	45	3	6	1			24					2		3		1	9	21	13		101	2,923
November.....	5	1	6	10															2	6	19		168	5,750
December.....	4		1		1				2						1				5		29		115	7,586
Total.....	21	3	69	24	11	3		2	26				1	4	1	3	2	1	21	35	101		676	24,665
Second semester, 1918:																								
January.....	2		3	6	1				2										5	1	11		58	4,311
February.....	8		1	2	1															15			48	2,988
March.....	4			5	2	1			2		1		1						4	5	20	1	39	2,576
April.....	3		5	9	1										1				3	3	14		37	2,192
May.....	4	1	4	3	1								1								0		46	2,153
June.....		1	2	3	1				1				1						3		5	1	20	1,089
Total.....	21	2	15	28	6	1			7		2		3		1				21	11	75	2	218	15,309
Total 1918-19.....	42	5	84	52	17	4		2	33		2		4	4	2	3	2	1	45	46	176	2	924	39,974

Table showing infantile mortality under 1 year during the fiscal year 1918-19.

Municipalities.	General diseases.													Diseases of the nervous system.					Diseases of the circulatory system.											
	Malaria.	Typhoid fever.	Measles.	Whooping cough.	Diphtheria.	Grippe.	Cholera nostrac.	Dysentery.	Erysipelas.	Septicemia.	Tuberculosis.	Meningeal tuberculosis.	Abdominal tuberculosis.	Tuberculosis of other organs.	Rickets.	Syphilis.	Anemia.	Scurvy.	Tetanic tetanus.	Other general diseases.	Encephalitis.	Convulsions of infants.	Cerebral congestion.	Other diseases of the spinal cord.	Epilepsy.	Diseases of the ears.	Acute endocarditis.	Organic diseases of the heart.	Other diseases of the circulatory system.	
Adjuntas	28					12		1							2							4								
Aguada					1	17						2	1		13	2						4								
Aguadilla						17																								
Agua Buenas						17																								
Albionito				1		9									2															
Anasco	14					7									6															
Arecibo	8			2	1	4		1				1			12	1						3								
Arroyo				1											4							17								
Barceloneta						8						1			2							1								
Barraquitas	14					7									4							1								
Barros						22									1															
Bayamon						15									1															
Cabo Rojo	11	3			1	13									13	1						4								
Caguas	2			2	1	9									10							14								
Camuy						3									6							7								
Carolina						1									1															
Cayey	1				1	19									1							1								
Cidra						1																								
Clares						8									1															
Cobos						1									2															
Cidra						7									2															
Comerio				3																										
Comerio.	1			2											2															
Corozal						15									2															
Dorado	7					4									3															
Fajardo					1	2									4															
Fajardo.				1	1	12							1		4							2								
Guaynabo.	1					9									2															
Guaynabo.						2																								
Guayama.	16			7		9						1			2															

Table showing infantile mortality under 1 year during the fiscal year 1918-19—Continued.

Municipalities.	General diseases.															Diseases of the nervous system.					Diseases of the circulatory system.										
	Malaria.	Typhoid fever.	Measles.	Whooping cough.	Diphtheria.	Grype.	Cholera nostrac.	Dysentery.	Erysipelas.	Septicæmia.	Tuberculous.	Meningeal tuberculous.	Abdominal tuberculous.	Tuberculous of other organs.	Rickets.	Syphilis.	Anæmia.	Scurvy.	Tetramelic tetanus.	Other general diseases.		Encephallitis.	Meningitis.	Convulsions of infants.	Cerebral congestion.	Other diseases of the spinal cord.	Epilepsy.	Diseases of the ears.	Acute en looarillitis.	Organic diseases of the heart.	Other diseases of the circulatory system.
Guayanilla.....	5	1				10										3															
Guarabo.....						9										3															
Ha. llo.....					1	2		1								3															
Hortigueros.....				1		6										4															
Humacao.....						15										6															
Isabela.....						4										5															
Jayuya.....	11					4		1								2															
Juana Diaz.....						1										1															
Leles.....			1			35		1								1															
Lares.....				1		1										1															
Las Marias.....						8										1															
Lolza.....						20										1															
Luquillo.....						1																									
Las Pi dras.....						10										1															
Manati.....	5			1		3										7															
Maricao.....						10										1															
Munabo.....	2		5			3										1															
Mayaguez.....	6			1		18										1															
Moca.....	1					21										54															
Mo. ovir.....				1		6										5															
Naguabo.....				1		1										1															
Naranjo.....				3		2										1															
P. lillas.....	6		1	2		5										2															
P. nillas.....						40										11															
P. nillas.....	17					3										1															
Quebradillas.....						1										5															
Rincon.....						13										1															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Total
The Priests.	7	1	1	9																							205
San Juan de los Rios.	11	1	6	7																							11
San Juan de los Rios.	1	1	2	6																							1
San Juan de los Rios.	1	1	3	1																							1
San Juan de los Rios.				10																							1
San Sebastian.	7			10																							7
San Sebastian.	1			9																							1
San Sebastian.	1			9																							1
San Sebastian.	3			4																							3
San Sebastian.				1																							1
Trujillo Alto.				35																							1
Utado.	1			1																							1
Vega Alta.	1			1																							1
Vega Alta.	3			6																							3
Vega Alta.	3			12																							3
Villalba.	3			3																							3
Yabucoa.	1			1																							1
Yauco.	15			11																							15
Vieques (Isle de).				2																							
Total.	205	1	20	52	15	626	2	20	6	8	5	4	3	366	29	26	1	2	3	3	128	52	33	1	4	1	1

Table showing infantile mortality under 1 year during the fiscal year 1918-19—Continued.

	Diseases of the respira- tory system.				Diseases of the digestive system.							Diseases of the genito- urinary organs.			Diseases of the skin.		Diseases of early infancy.				External causes.				Total.							
	Acute bronchitis.	Bronco-pneumonia.	Pneumonia.	Pulmonary congestion.	Asthma.	Diseases of the larynx.	Diseases of the mouth and annexa.	Diarrhea and enteritis.	Trichuriasis.	Intestinal parasites.	Intestinal obstruction.	Other diseases of the intes- tines.	Diseases of the liver.	Diseases of the pharynx.	Acute nephritis.	Diseases of the kidneys.	Diseases of the bladder.	Gangrene.	Diseases of the skin and annexa.	Ectomycetis.	Congenital malformations (stillbirths not included).	Congenital debility.	Other diseases peculiar to early infancy.	Infantile tetanus.		Lack of care.	Acute poisonings.	Burns (except conflagrations).	Accidental submersions.	Other external violence.	Causes of death not specified or ill defined.	
Adjuntas.	18	2	12				1	13							3						3	8	3								1	82
Aguada.								34		1												1	22	16	10							153
Aguadilla.	7	14	1					87		5						3						1	36	1	19							201
Aguas Buenas.	5							1		1						1						29	2	1	6							39
Albionito.	8	1	4					18								2						2	1	6								55
Anasco.	25	7	3					12								6						20	14	2	33							102
Arcebo.	55	1						119		2						1						2	11	6	4							208
Arroyo.	16	2						16								1						2	11	4	4							60
Barranquitas.	10	5						35								2						2	9	4	4							102
Barr S.	9	3	6					2		1						2						1	15	33								42
Bayamon.	25	4	4	1				68								1						32	4	7								104
Cabo Rojo.	12	4	2					27								1						17	1	34								194
Caguas.	41	11	22					74		2						1						2	18	1	4	10						146
Camuy.	20	2	3					15		1						4						2	18	1	4	10						230
Carolina.								25								1						29	27	1	2							93
Cavey.	8	13	8					60								1						8	24	11								158
Cebal.	1							21								1						8	2	1								42
Ciales.	19	10	1					14		2						1						23	11	2	1							98
Cidra.	13	4						13		3						1						1	11	12								69
Coamo.	9	3						28								2						2	23	3								65
Comerio.	7	7	1					19		2						4						2	23	3								73
Corral.	1	1	3					3								1						2	4									81
Dorado.	1	1	6					1								6						1	30	4	2							108
Fajardo.	4	13	3					39		1						1						2	13	3	10							70
Guaynabo.	2							11		3						1						1	30	4	2							41

[illegible]

140185-19-15

Table showing infantile mortality from 1 to 2 years during the fiscal year 1918-19.

Municipalities.	General diseases.														Diseases of the nervous system.					Diseases of the circulatory system.										
	Malaria.	Typhoid fever.	Measles.	Whooping cough.	Diphtheria.	Grippe.	Cholera nostrac.	Dysentery.	Erysipelas.	Septicemia.	Tuberculosis.	Meningeal tuber- culosis.	Abdominal tuber- culosis.	Tuberc. of other organs.	Rickets.	Syphilis.	Anemia.	Scurvy.	Tetanic tetanus.	Other general dis- eases.	Encephalitis.	Meningitis.	Convulsions of in- fants.	Cerebral congestion.	Other diseases of the spinal cord.	Epilepsy.	Acute endocarditis.	Organic diseases of the heart.	Diseases of the ym- phatic system.	
Adjuntas.....	1					31		2							3	2	2													
Aguada.....	19					11									2															
Aguadilla.....	1					4									16															
Aguas Buenas.....						1									8															
Aibonito.....						11									15															
Anasco.....	6					2									22		3													
Arecibo.....	9					4									6															
Arroyo.....	2					1									1															
Barceloneta.....	11					12									9															
Barranquillas.....						8									2															
Barros.....	1					23									1															
Bayamon.....						6									15															
Cabo Rojo.....	7					11									23		1													
Caguas.....	3					8									8															
Camuy.....	1					2									11															
Cavey.....						12									6															
Ceiba.....						13									1															
Ciales.....						7									8															
Cidra.....						8									2															
Coamo.....						3									5															
Comerio.....	4					12									4															
Coro-al.....						4									6															
Dorado.....	1					1									4															
Fajardo.....						7									4															
Guaynabo.....						1									4															
Guayama.....	1					1									4															
Guayama.....	9					1									4															
Guayama.....	4					15									4															
Guayama.....	2					6									4															
Habito.....	1					5									4															
Hermiguares.....						1									2															

[illegible]

Table showing infantile mortality from 1 to 2 years during the fiscal year 1918-19—Continued.

Municipalities.	Diseases of the respira- tory system.				Diseases of the digestive system.										Diseases of the genito- urinary organs.				Diseases of early infancy.			External causes.			Ill- defined diseases.	Total.					
	Acute bronchitis.	Bronco-pneumonia.	Pneumonia.	Pleurisy.	Asthma.	Diseases of the larynx.	Diseases of the mouth and anæra.	Diarrhea and enteritis.	Uncinariæ.	Intestinal parasites.	Appendicitis.	Intestinal obstruction.	Other diseases of the intestines.	Diseases of the liver.	Diseases of the pharynx.	Acute nephritis.	Diseases of the kidneys.	Diseases of the bladder.	Gangrene.	Diseases of the skin and anæra.	Ectomellitis.	Congenital malformations (stillbirths not included).	Other diseases peculiar to early infancy.	Lack of care.			Burns (except con- grals).	Accidental submersions.	Other external violence.	Ill-defined organic dis- eases.	Causes of death not spec- ified or ill defined.
Adjuntas.....	8	6	5	1	1	1	7	10	2	2	1	1	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	1	74
Aguada.....	1	1	1	1	1	1	41	5	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	90
Aguadilla.....	3	3	8	1	1	1	5	5	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	66
Aguas Buenas.....	10	8	2	1	1	1	5	5	4	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	41
Aibonito.....	8	2	1	1	1	1	11	60	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	42
Anasco.....	10	1	3	1	1	1	60	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	59
Arecibo.....	24	9	1	1	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	147
Arro'o.....	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17
Barceloneta.....	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19
Barranquitas.....	4	4	3	1	1	1	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	34
Barros.....	11	4	1	1	1	1	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	62
Bayamon.....	11	4	3	1	1	1	50	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	88
Cabo Rojo.....	16	4	10	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	119
Caguas.....	12	1	1	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	36
Camuy.....	1	1	1	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
Carolina.....	1	1	1	1	1	1	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32
Cayey.....	2	5	1	1	1	1	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	48
Cedra.....	2	5	1	1	1	1	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26
Ciales.....	5	1	1	1	1	1	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50
Cidra.....	8	1	1	1	1	1	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32
Comerio.....	7	1	1	1	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25
Coro al.....	2	2	9	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21
Dorado.....	2	2	3	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27
Fajardo.....	2	6	3	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
Guaynabo.....	1	7	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
Guayama.....	1	7	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20
Guayanilla.....	1	4	1	1	1	1	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
Guayanilla.....	1	4	1	1	1	1	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	33
Guayanilla.....	1	4	1	1	1	1	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	44

[illegible]

Guaymas...	372	217	147	1	6	10	4	839	91	142	3	3	6	22	4	4	196	10	2	5	3	2	1	10	13	4	16	141	4,245
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	19	10	4	4	4	1	1	1	1	3	6	6	1	1	1	1	1	1	1	1	1	1
Guaymas...	13	1	5	1	1	1	1	1																					

APPENDIX IV.

REPORT OF THE AUDITOR, AND CONSOLIDATED FINANCIAL EXHIBITS.

SAN JUAN, P. R., *September 10, 1919.*

SIR: Pursuant to provisions of law, I have the honor to render the following report comprising such comments and recommendations as are pertinent to the activities of my office, and details of the financial operations carried on during the fiscal year 1918-19 by the insular government and by the municipalities and school boards of the island of Porto Rico.

SYSTEM OF AUDITING AND ACCOUNTING.

The system of auditing and accounting in force has been pronounced thoroughly efficient in previous reports. Changes of minor importance introduced in the course of various years have contributed to a great extent in simplifying accounting of the public finances. Since the system was installed on July 1, 1911, it has materially increased comprehension of government finances and shortened the procedure that necessarily followed in past years, for consolidating the figures required in the different reports rendered by this office.

Having in view the necessity of establishing standardized methods for the accounting of funds of the municipalities and school boards, this office undertook the preparation of new sets of regulations for that purpose. In consultation with modern authorities on the matter the work was greatly developed when it was suspended pending action by the legislature on matters concerning the municipal organizations. Act No. 85, approved at the last session of the legislature, provides for establishing a system of local government and reorganizing municipal services. This law marks the beginning of a new era in the administration of local affairs. The enactment of new legislation in the direction of a more ample form of municipal government will require a thorough revision of the work in order to adopt such measures as will best serve to control revenues and expenditures and show complete details in the management of the municipal institutions.

APPROPRIATIONS.

At the time for closing operations for the fiscal year 1917-18 there were appropriations approved by the legislature to the total of \$930,149.18, which had not been set up on the books of the auditor for the reason that they were authorized in violation of the provisions of section 34 of the organic act, being in excess of the total revenue provided and applicable for expenditures of the ensuing fiscal year. Besides the foregoing amount, there were the following appropriations authorized by certain laws and resolutions of the first session of the ninth legislature, promulgated and published in virtue of a decision of the supreme court of Porto Rico, dated March 11, 1919:

Act or joint resolution.	Purpose.	Amount.
Act No. 96	Construction of an artesian well at Hato Tejas ward, municipality of Bayamon.	\$700.00
Act No. 97	Construction of a cistern at Playa de Humacao.	1,000.00
Act No. 98	Survey and construction of an artesian well at Higullar ward, jurisdiction of Vega Alta and Dorado.	2,000.00
Joint Res. 28	Settlement of claim of the "Sucrerie Centrale Coloso"	6,593.16
Joint Res. 29	Indemnity to Notary Juan Zatarinas Rodriguez.	3,600.00
	Total	13,893.16

With this additional amount the total of null appropriations approved at the first regular and extraordinary sessions of the ninth legislature is increased to \$943,952.34. Although this office endeavored to make this situation well known, it did not serve to prevent legislative action authorizing appropriations that are in conflict with our

statutory law. Appropriations amounting to \$495,509.18 were approved at the second ordinary session of the ninth legislature, adjourning on July 6, 1919, which are over and above the revenues provided for the fiscal year 1919-20. The following statement describes the latter appropriations:

Act or joint resolution.	Purpose.	Amount.
Act No. 10.....	Promoting the education of illiterate children and adults.....	\$20,000.00
Act No. 15.....	Establishing elementary night schools in the rural districts of Porto Rico.....	15,000.00
Act No. 33.....	Rebuilding and equipment of a building devoted to the teaching of agriculture in the Mayaguez College of Agriculture and Mechanic Arts.....	35,000.00
Act No. 35.....	Reimburse the school board of Ponce.....	9,639.15
Act No. 36.....	Prevent, and aid in the settlement of strikes and lockouts.....	15,000.00
Act No. 49.....	Issuance of bonds for road construction.....	10,000.00
Act No. 63.....	Beginning irrigation works in the vicinity of Isabela and Aguadilla.....	200,000.00
Act No. 66.....	Construction of four buildings for uncinariasis and malaria hospitals.....	40,000.00
Act No. 71.....	Issuance of bonds for the purpose of constructing houses for artisans and laborers, etc. (homestead expenses).....	30,000.00
Act No. 71.....	Scholarships for 12 students in schools of mechanic arts and agriculture in the United States.....	10,000.00
Act No. 71.....	Expenses of representation, resident commissioner at Washington, D. C.....	5,000.00
Act No. 75.....	Purchase of unmatured bonds of The People of Porto Rico.....	1,000.00
Act No. 76.....	Creation of leper asylum.....	65,000.00
Act No. 78.....	Payment to lawyer Celestino Iriarte, jr., for services rendered to a member of the insular police.....	50.00
Act No. 83.....	Erection of a monument to Muñoz Rivera on the grounds of the University of Porto Rico.....	800.00
Joint Resolution 21.....	Establishing a system of telegraph money orders.....	15,000.00
Joint Resolution 24.....	Payment to teachers for pension or retirement.....	3,000.00
Joint Resolution 26.....	Improvement and extension of the insular telephone system.....	12,000.00
Joint Resolution 32.....	Repair of road from Guanica to Insular Road No. 2.....	9,000.00
Total.....		495,509.18

Provision was made again for scholarships of students to pursue higher education in the United States. In an opinion rendered by the attorney general upon similar appropriations provided in the general appropriation act for 1918-19, it was held (a) that the payment of scholarships does not constitute ordinary expenses for the support of the government, for which reason appropriations of such nature were considered as contrary to the provisions of section 34 of the organic act, and (b) that scholarships were classed as donations prohibited by the bill of rights of the said organic act.

In my report for the past fiscal year attention was called to the fact that appropriations amounting to \$930,149.18, in excess of the estimated revenue, were made. I regret very much the necessity of stating that the appropriations for the fiscal year 1919-20 are \$495,509.18 in excess of the estimated income.

It is scarcely necessary to again call attention to the fact that such excess appropriations are in violation of the existing organic law, and that, therefore, the treasurer and auditor can not set up on their books appropriations in excess of income, even though such appropriations are in many cases very commendable to their object.

The appropriations standing on the books of this office on July 1, 1919, as shown in Exhibit No. 32 herewith, total \$9,521,917.44; this amount being \$1,649,707.78 in excess of the estimated cash income and appropriation assets for the fiscal year 1919-20. The estimated deficit as it now stands, \$1,649,707.78, is \$1,231,494.62 larger than that of \$418,213.16 appearing for the fiscal year 1918-19. Comparison renders such a growing scale unbearable, as under these circumstances it is self-evident that the only possible means to prevent exceeding the cash resources of the government, will be the curtailment of public services.

FINANCIAL EXHIBITS.

The exhibits appearing in this report were prepared by the following departments:
Auditor of Porto Rico: From No. 1 to No. 5, inclusive; Nos. 11, 12, and 13; No. 25 (disbursements); Nos. 27, 28, and 29; No. 30 (disbursements); No. 31 (disbursements); and No. 32.

Department of finance: Nos. 6 to 9, inclusive; Nos. 14, 19, and 20 to 24, inclusive. Nos. 25 (receipts), 26, 30 (receipts); and No. 31 (receipts).

University of Porto Rico: Nos. 15 to 18, inclusive.

Department of the interior: No. 10, and Nos. 33 to 37, inclusive.

Porto Rico irrigation service: Nos. 38, 39, and 40.

COMPARATIVE STATEMENT OF ACCRUED EXPENSES PAYABLE FROM INSULAR REVENUE APPROPRIATIONS FOR THE YEARS ENDED JUNE 30, 1918, AND JUNE 30, 1919 (EXHIBIT No. 5).

The fiscal year 1918-19 has been marked with net increases of \$338,035.98 for salaries and \$485,284.86 for other government expenses, totaling \$823,320.84.

Extraordinary expenses were incurred in suppression of the influenza epidemic and in aiding the victims of the earthquakes. The prevailing high cost of the attributes of living also contributed to a large extent in bringing up the increases, which are fully detailed as follows:

LEGISLATIVE DEPARTMENT.

The elimination since August 12, 1917, of the old branches of the legislature, namely, the executive council and the house of delegates, decreased expenditures for the past year by \$2,773.44 and \$1,657.60, respectively, while fluctuations of minor importance in the expenses of the senate and house of representatives, as newly organized by the organic act approved March 2, 1917, shows a final saving of \$4,833 in the expenses of the legislative department.

EXECUTIVE DEPARTMENT.

Governor: Savings were effected in the office of the governor, to the amount of \$1,822.80, in the total expenses for the year, discontinuance of the "Special service fund," carrying \$1,000 for the previous fiscal year, and a decrease of \$721.50 in salaries being the principal items of consideration.

Executive secretary: There have been no important differences between the expenses incurred by the office of the executive secretary during the fiscal year 1918-19 and the cost of running the same office during the fiscal year 1917-18. The increase of \$1,074.97 in salaries of the secretary's office proper is taken care of by decreases of \$294.30 in the appropriation for incidentals and \$748.77 in traveling expenses of the bureau of weights and measures.

Public service commission: The running expenses of the commission during the year under review have been \$5,585.32 greater than those for the fiscal year 1917-18. In considering these expenses, allowance should be made for that part of the fiscal year 1917-18, during which time the commission was not in operation, as it was provisionally organized on October 4, 1917, that is, after three months of the fiscal year had elapsed. To these circumstances there should be added the consequent increase in the scope of activities of a newly created service.

Justice: This department shows a net increase of \$30,462.73 in its expenses for the fiscal year 1918-19. The attorney general's office proper shows a decrease of \$449.51 among its different items, but as to the penal institutions the aspect of the question changes to marked increases, almost without exception, in the amounts paid for articles of food, clothing, miscellaneous equipment, etc. A considerable portion of the increases in penal institutions was due to the active campaign initiated during 1917-18 for the suppression of vice and prostitution, constituting an important contribution to the welfare of the island's quota in the National Army.

Finance: A net increase of \$47,120.37 develops in the administration expenses of the department of finance. This amount is mostly made up of \$18,167.99 in salaries, \$4,503.92 in traveling expenses, \$4,933.85 in levying additional income taxes, \$4,958.39 in premiums on bonds of employees (carried under general miscellaneous for previous years), and \$22,187.03 in reimbursing municipalities for influenza expenditures. A decrease of \$6,677.76 is shown in the item for revision of the assessment of property. The increases in salaries, traveling expenses, and levying additional income taxes were due to activities of the department in the direction of increasing government revenues, while that for reimbursing municipalities for influenza expenditures does not constitute an expense incurred in the administration of the department of finance properly speaking.

Auditor: In 1918-19 the expenses of this office were larger than in 1917-18. Salaries was the most important item subject of increase, carrying \$8,721.75 more than the previous year. The increases effected in the salaries of employees of the division of general accounts, the re-engagement of a chief accountant in the same division and the prevalent necessity of keeping the office force at its full strength throughout the year, absorbed the increase as noted. The amount of \$989.46 is shown as a decrease for incidentals.

Interior: The department of the interior reached a net increase of \$58,595.92 in the expenses for the past fiscal year, as compared with those for the one immediately preceding. The commissioner's office proper shows increases of \$5,495.48 for salaries, \$752.35 for blank books and printing, \$519.15 for automobile expenses, and \$2,473.92

for purchase of automobile plates. These increases are partly offset by decreases of \$1,756.14 on account of incidentals, \$567.11 in traveling expenses, \$267.28 in postage and freight, and \$1,932.86 in expenses of the division of public lands. Maintenance and repair of public roads and bridges consumed \$36,929.27 more this year than the former. The expenses on account of maintenance, repair, and reconstruction of public buildings show an increase of \$10,548.56 over the previous year; \$25,816 was expended in building new dormitories for the boys' and girls' charity schools. Improvements were effected at the College of Agriculture and Mechanic Arts, Mayaguez, at a cost of \$4,461.57. Many increases of varied importance are noted in items appearing under the general heading entitled "Earthquake relief fund." These appropriations were made in order to effect the repair of insular government buildings and to aid municipalities and school boards in the reconstruction of their buildings damaged by the earthquakes that took place during October and November, 1918.

Insular telegraph: The insular telegraph service was performed at a cost of \$6,292.30 greater than in the year 1917-18. The expenses are marked by an increase of \$8,470.11 for salaries and a decrease of \$1,908.23 on account of incidentals. Most of the increase in salaries was consumed by allowing compensation for extra work and to additional personnel during the earthquake and influenza periods.

Education: Educational institutions show increases in their expenses to the amount of \$236,745.74. The most important items carrying increases were: Salaries of the common schools, with \$220,944.60 devoted to the running of new schools; textbooks and school supplies increased by \$11,086.16; salaries provided for additional high-school teachers to the amount of \$7,237.09; and night schools consuming \$4,618.00. Decreases were obtained in contingent expenses of high schools, amounting to \$778.10; summer schools and institutes were \$1,034.06 less expensive than the previous year; a \$500 decrease resulted from discontinuance of scholarships for students in the United States, and \$1,734.53 appears as decrease in expenses from the magazine publishing fund. During the fiscal year 1918-19 the expenses incurred in the publication of the school magazine were borne out of a trust fund set up from receipts for account of subscriptions and publication of advertisements, thus producing the aforementioned decrease.

Carnegie Library: The net increase of \$725.33 resulted from the excess of \$1,906.42 for incidentals and savings of \$1,181.09 in salaries.

Government of the Island of Culebra: Provision was made in the budget of 1918-19 increasing the salaries of the personnel of the government of the Island of Culebra, thus increasing the year's expenses in this item by the sum of \$1,009.51. Other public services were paid for to the amounts of \$60 for rent, \$420 for lighting, \$300 for street cleaning, and \$67.81 for supplies and medicines. This new division in the appropriations for 1918-19 is responsible for the apparent decrease of \$712 in contingent expenses, from which payment was made for the aforementioned services rendered during 1917-18.

Agriculture and labor: The development of the agricultural service has increased the expenses of this department by \$19,350.71. The bureau of agriculture shows increases of \$8,725.90 for salaries, \$2,704.67 for traveling expenses, \$634.51 for printing and stationery, and \$235.45 for postage and freight. In the experimental station salaries were \$4,628.43 greater; traveling expenses increased \$1,082.80; incidentals went \$955.02 over similar expenses for 1917-18; supplies were bought for \$344.71 more than the previous year; and postage and freight were more expensive by the amount of \$172.63. Decreases are shown in farm labor to the amount of \$1,021.33; in printing and stationery, \$518.24; and in maintenance of buildings, \$1,134.99. In the study and conservation of insular forests there was incurred an expense of \$2,214.41.

Insular police: The annual compensation to guardsmen of the insular police was increased from \$480 to \$540 per annum, this being the most important item marking the excess of \$33,275.13 in salaries for 1918-19. Other increases in the police service were: \$1,296.28 for rent of quarters, \$1,554.55 for transportation, \$3,296.32 for automobile supplies and repairs, \$552.33 for secret and confidential service, \$652.10 for incidentals, \$3,941.74 representing extra pay for reenlistments, \$359.26 for bicycle repairs, and for \$1,000 compensation for members who lost their lives in the performance of their duties. No elections having been held during 1918-19, a decrease of \$7,192.67 is shown on this account.

Health: A large increase in administration expenses for the year was felt in the department of health, where the excess is represented by the amount of \$334,474.01. The influenza epidemic, prevailing between November, 1918, and February, 1919, was responsible for the largest increase, which carried \$257,178.20. Other items deserving attention are detailed as follows: The commissioner's office proper augmented \$4,791.55 for salaries, \$1,366.53 for postage and freight, \$1,539.56 for miscel-

laneous stationery and printing, \$1,188.47 for supplies and equipment of the chemical laboratory, \$9,171.15 for traveling expenses, and \$7,113.28 paid for rent of quarters all over the island. The leper colony discloses a decrease of \$1,889.66, caused by savings of \$3,257.97 in subsistence, clothing, and bedding, and additional expenses of \$1,364.31 in salaries and incidentals. Improvements at the quarantine hospital buildings cost \$3,193.21 more than 1917-18. The increase of \$7,006.99 for salaries of the field force was surpassed by decreases in the other items of this division, which not only reduced the aforementioned increase, but resulted in a net decrease of \$3,291.82. Seven thousand two hundred and twelve dollars and forty-seven cents for suppression of anemia appears as having been expended during 1918-19 in excess of like expenses for 1917-18. While mosquito extermination shows the increase of \$13,589.19, decreases more than sufficient to offset the excess are disclosed by salaries, traveling expenses, and incidentals, as the expenses of this service were divided in 1917-18. Miscellaneous expenses of the blind asylum were \$2,029.96 less, the principal reductions being noticed in subsistence, clothing, and bedding. Fluctuations of \$3,767.91 more for salaries and \$2,872.16 less for subsistence in the insane asylum, resulted in a small increase of \$691.96 in this institution. Considerable increases were experienced in the girls' and boys' charity schools, the former carrying \$8,687 and the latter \$14,120.95. These increases were absorbed by salaries, \$9,856.72; subsistence, \$3,574.50; and contingent expenses, \$9,377.73. The emergency fund for control and suppression of epidemics shows an increase of \$24,615.72, caused by the initial expenses during the influenza epidemic. More extensive services rendered in the care of tuberculosis patients brought the expenses on this account to \$18,712.25 more than the former year.

Civil service: Salaries and incidentals of the civil service were \$564.20 and \$556.20 less, respectively, with increases of \$550.51 for stationery and printing, and \$106.48 for postage and freight. During the previous years the two latter items were borne out of incidentals.

Institute of tropical medicine and hygiene: Last year's expenses of this institution compare favorably with those for 1917-18. Only \$53.98 appears as the net increase between the two years.

General miscellaneous: The expenditures subject to the approval of the governor appear to have been \$7,929.84 greater, principally due to special activities during the occurrence of the earthquakes. As no elections were held during 1918-19, a decrease of \$24,701.20 is shown by this item. The National Guard fund shows \$1,026.54 in excess of the amount expended in 1917-18. The decrease of \$4,715.31 in premium upon bonds of employees is due to the fact that expenses of this nature for 1918-19 were carried under the department of finance. The increases of \$3,561.90 for temporary employees and \$426.99 for incidentals disclosed by the translation bureau are due to greater amount of work performed by this office. An increase of \$24,747.20 is shown for expenses incurred in the entertainment of the members of the Congress of the United States who visited Porto Rico last April. In order to raise funds for extending aid to the victims of the earthquakes, loans were contracted and repaid to the amount of \$19,286.65 with the "Banco Comercial," \$11,998.04 with the "Royal Bank of Canada," \$8,838.45 with the "American Colonial Bank," and \$4,999.63 with the "Banco Territorial y Agricola."

JUDICIAL DEPARTMENT.

The expenses of the supreme court were \$698.08 greater in the past year than what they were in 1917-18. The district courts show increases of \$3,063.30 for salaries, \$577.95 for incidentals, and \$1,198.88 for rent, as against important decreases of \$4,711.34 in fees of jurors and \$7,326.44 in fees of witnesses. The expenses of the municipal courts remained almost the same. Salaries were \$1,398.26 less for the registrars of property, with increases of \$301.40 for incidentals and \$600 in the salary of a clerk at large.

DIVISION OF GENERAL ACCOUNTS.

Once again this division has worked under considerable hardship in compiling the necessary data for setting up the appropriations authorized at the second special and second ordinary sessions of the ninth legislature. The appropriation act providing for the ordinary government expenditures was not definitely approved until June 20, 1919, and within the short period of 10 days remaining before the close of the fiscal year on June 30, the division succeeded in having all appropriation warrants issued to permit opening the necessary accounts for the ensuing fiscal year. Everything was ready in time, so that no interruption might be experienced, and on June 30

the heads of departments were furnished with copies of the warrants setting up the appropriations for their respective dependencies. The data for opening accounts had heretofore been obtained from the digest of appropriations, which has its origin in the laws authorizing expenditures; but the circulation of the digest of the fiscal year 1919-20 has been prevented by the fact that the "Laws of 1919" have not been published as yet.

The campaign initiated in 1917-18 to close dead appropriations was continued during the past year, making it possible to drop a few of those accounts.

The work of the division was increased by the disbursing officers' personal accounts. The importance of this work is made evident when it is considered that in scrutinizing the supporting documents, care should be taken as to the propriety of the charges as well as the prices.

Several claims were established during the year with satisfactory results. In one instance it was found necessary to carry before the United States Shipping Board a claim against an ocean transportation company, and after arduous efforts this office succeeded in recovering the amount of \$3,143.83 erroneously paid for freight. Through the discovery of the unauthorized use of a public building by a commercial concern, a claim was successfully settled for the sum of \$662.45. Many claims for lesser amounts were also carried to a successful end.

DIVISION OF DISBURSEMENTS AND CLAIMS.

The principal item of work performed by this division during the past year consisted in auditing 109,706 vouchers, covering disbursements aggregating \$12,636,490.04, with an increase of 4,000 in the number of vouchers handled.

A thorough revision was made of the scheme for preventing duplicate payments by carrying on a complete check of all vouchered bills against the index and register of settlements. Steps were also taken, after careful consideration of the matter, to have the index clerk pass upon all vouchers prior to entering them in the daily warrant, preventing thereby the repayments made necessary heretofore in order to adjust duplications. A new system to prevent errors in checks issued was also put into effect during the year. This system has proved its value and the defects in the past have now been fully overcome.

Although the arrangements outlined above involved material increase in the work all business was satisfactorily carried out without additions to the personnel; in fact, the division turned out a significantly larger amount of work during the fiscal year with the usual high standard of efficiency.

DIVISION OF AUDITS.

As stated in our report for last year, under the authority of the new organic act the auditor's office has, during the year just past, been intimately connected with the municipalities and school boards of the island. Besides solving many problems relating to proper accounting procedure, the various corporations have been made to understand that the auditor's office with its personnel is greatly interested in every question that will effect their success.

TABLE NO. 1.—Statement of receipts of the various municipalities of Porto Rico for the fiscal year ending June 30, 1919.

Municipalities.	Balance. July 1, 1918.	Cash bond deposits.	Proceeds from loans.	Other trust funds.	Property tax.	
					Road fund.	General fund.
Adjuntas.....	\$631.06	\$1,163.79			\$1,217.89	\$10,199.44
Agüada.....	2,594.03				1,100.43	9,216.15
Aguaílla.....	1,675.95		\$3,000.00	\$1,800.00	1,402.93	11,749.40
Agua Buenas.....	1,324.94	2,695.00			330.74	2,799.03
Afonso.....	2,338.36	215.00		110.00	734.10	6,164.94
Anasco.....	247.34				1,247.85	10,450.61
Arecibo.....	11,210.46	2,928.25		6.85	5,363.71	44,925.48
Arroyo.....	1,596.40	180.00	5,000.00		1,276.25	10,183.34
Barceloneta.....	4,097.82				1,473.33	12,339.54
Barranquitas.....	1,255.84				358.82	3,109.94
Barros.....	752.54				565.82	4,738.86
Barramon.....	4,182.76			491.52	2,914.34	24,409.04
Cabo Rojo.....	5,196.27				1,449.53	12,158.74
Caguas.....	3,460.34	1,888.56			3,137.35	28,277.97
Camuy.....	1,061.02	205.00			1,154.11	9,665.91
Carolina.....	5,422.62	6,299.63			1,713.41	14,349.68
Cayey.....	7,983.40	210.00		1,122.63	1,902.46	15,933.31
Ceja.....	494.83	880.00			620.09	5,193.37
Ciales.....	2,036.60	141.001			1,137.74	9,528.62
Citra.....	715.12				549.02	4,597.97
Coamo.....	1,511.79				1,194.70	10,006.79
Comerio.....	6,678.17	2,285.50			1,410.66	11,816.74
Corozal.....	2,119.40	210.00			396.83	3,236.50
Derado.....	1,395.31			40.00	777.57	6,512.26
Fajardo.....	14,802.53	174.63	6,000.00	15,715.00	2,489.89	20,858.23
Guanica.....	4,861.10				3,744.49	31,369.09
Guanama.....	7,513.26	458.20		1,957.57	2,750.29	26,055.08
Guanilla.....	6,142.28		2,600.00		1,239.66	10,382.13
Guanabo.....	1,733.21				640.26	5,362.09
Gurabo.....	2,978.12	450.00			869.75	7,284.17
Hatillo.....	2,739.45	10.80			860.55	7,276.85
Hormigueros.....	2,481.56	38.38			606.44	5,078.97
Humacao.....	12,578.18	5,440.00		50.00	2,568.19	21,508.60
Isabela.....	371.87	144.00			824.09	6,901.90
Jayuya.....	3,132.02				644.57	5,398.17
Juncos.....	5,151.09	8.00		72.50	1,780.06	14,881.93
Lajas.....	1,064.15	4,467.63	4,500.00		1,297.37	10,869.79
Lares.....	1,427.35	1,975.00			1,238.70	10,374.19
Lares.....	4,785.85	1,149.80			1,653.17	13,845.77
Las Marias.....	1,709.64				1,014.17	8,493.88
Las Piedras.....	3,386.17				577.34	4,835.15
Loiza.....	4,091.16	3,106.00			1,717.47	14,383.62
Laquillo.....	2,569.57	39.00			652.10	5,461.67
Manatí.....	3,695.63	5,326.65			1,851.32	15,504.89
Maricao.....	1,863.74				994.08	8,324.40
Maricao.....	3,448.99	1,289.00	1,500.00		547.87	4,588.28
Maraguez.....	9,599.51	2,046.00	572.60	732.16	5,431.23	45,490.80
Moca.....	1,247.61				647.90	5,426.32
Morovis.....	207.43	8.00			491.10	4,113.03
Narabo.....	6,420.30	435.00			1,276.83	10,693.36
Naranjito.....	1,304.43				254.97	2,135.35
Pailas.....	635.22	405.00	2,966.61	25.00	971.51	8,136.32
Penuelas.....	287.24				785.31	6,576.66
Ponce.....	23,120.37	303.00	10,000.00	50,012.64	10,978.70	91,946.66
Quevedillas.....	634.09				533.65	4,469.10
Rincon.....	2,178.08				569.38	4,768.50
Rio Grande.....	705.04	4,896.00			1,117.08	9,355.60
Rio Piedras.....	3,056.50	14,839.00	84,000.00		3,198.67	26,789.27
Salina Grande.....	2,246.59				460.39	3,855.70
Salinas.....	4,483.60			80.00	3,155.21	26,425.43
San German.....	2,056.77	6,539.64			1,680.31	14,072.94
San Juan.....	248,929.61	26,967.31	117,452.24		13,943.72	195,158.39
San Lorenzo.....	1,218.80	1,967.00			666.94	5,585.60
San Sebastian.....	5,221.20	429.02			1,434.41	12,013.29
Santa Isabel.....	5,428.88	15.00			1,644.35	13,771.32
Ton Alto.....	1,313.55	2,245.00			522.36	4,374.71
Tos Baja.....	3,829.40	259.00			1,404.83	11,785.46
Trujillo Alto.....	6,461.75	20.00			708.91	5,937.11
Utuado.....	6,109.26	15.00	8,960.00		2,071.16	17,346.04
Vega Alta.....	1,946.40				894.83	7,494.30
Vega Baja.....	4,678.08	943.50			1,469.56	12,307.66
Vieques.....	1,438.56	50.00	20,000.00		1,955.32	16,375.64
Villalba.....	1,771.92				394.67	3,306.30
Yabucoa.....	9,254.78	1,041.00			1,518.37	12,716.24
Yauco.....	1,430.82	625.00	40,000.00		1,891.37	15,840.34
Total.....	519,578.08	107,295.09	306,551.45	71,715.77	125,986.55	1,136,743.22

TABLE NO. 1.—Statement of receipts of the various municipalities of Porto Rico for the fiscal year ending June 30, 1919—Continued.

Municipalities.	Operation of public utilities.	Industrial and commercial licenses.	Repayments.	Use of municipal property.	Miscellaneous.	Total.
Adjuntas.....		\$2,015.87	\$1,170.70	\$178.50	\$143.55	\$3,428.62
Aguada.....		725.72	979.07	121.50	147.06	14,883.96
Aguadilla.....	\$3,950.84	6,330.60	602.55	910.75	700.54	31,613.28
Agua Buenas.....		1,317.40	69.57	318.25	312.06	9,137.59
Aibonito.....	2,542.75	2,077.82	280.38	247.25	145.54	14,838.14
Anasco.....		1,771.25	622.71	84.65	109.95	14,534.36
Arecibo.....	20,528.60	13,393.66	2,862.96	4,986.20	1,411.54	107,628.71
Arroyo.....	2,851.17	2,265.90	367.98	1,062.32	191.87	24,925.23
Barceloneta.....		1,616.31	599.41	201.60	294.58	20,622.49
Barranquitas.....	792.00	888.09	97.36	204.20	97.02	6,783.27
Barros.....		778.18	96.60	128.65	93.11	7,153.68
Bayamon.....		8,422.60	685.21	1,200.60	6,239.49	48,545.55
Cabo Rojo.....		3,423.03	468.08	1,677.64	534.27	24,807.46
Caguas.....		9,552.34	396.15	11,297.17	2,621.20	58,633.06
Camuy.....		1,428.83	155.23		61.97	13,732.07
Carolina.....		2,129.23	248.11	933.73	1,018.74	32,115.15
Cavey.....	7,182.64	4,500.54	434.25	414.75	2,406.45	42,083.53
Cela.....		760.31	125.49	64.00	39.83	8,157.92
Ciales.....	1,214.30	1,969.16	321.28	484.75	876.67	17,710.12
Cidra.....		1,236.96	233.71	613.80	250.14	8,196.72
Coamo.....	3,405.75	1,821.10	497.57	951.08	964.16	20,371.94
Comerio.....	1,266.47	1,389.24	104.76	657.37	1,294.31	26,823.22
Corozal.....	866.50	1,643.32	109.11	396.25	177.15	9,118.66
Dorado.....		631.91	373.41	547.45	375.19	10,662.19
Fajardo.....	9,291.26	6,373.71	1,032.90	1,774.00	1,111.12	79,632.27
Guánica.....	36.00	2,108.39	150.92	431.42	1,146.68	43,839.09
Guayama.....	14,350.67	7,638.44	1,308.28	1,992.30	697.33	64,721.43
Guayanilla.....	908.80	1,090.83	99.65	134.95	126.30	22,724.66
Guaynabo.....		756.98	429.85	43.50	145.73	19,111.63
Gurabo.....	2,071.48	977.71	100.56	619.54	849.58	16,200.91
Hatillo.....		894.16	206.71	141.78	901.21	12,361.49
Hormigueros.....		536.06	482.27	38.75	123.67	9,384.08
Humacao.....	4,978.14	9,750.54	560.18	3,947.70	2,567.31	63,878.82
Isabela.....	124.27	2,012.42	119.75	50.75	47.32	10,598.37
Jayuya.....	371.55	1,093.16	102.22	89.25	118.09	10,891.62
Juana Díaz.....	177.50	2,023.66	1,059.64	1,460.84	509.19	27,122.13
Juncos.....	2,744.34	3,436.83	301.08	1,141.30	981.35	30,803.84
Lajas.....		1,257.49	192.84	178.70	337.45	16,981.73
Lares.....	3,029.84	2,523.34	600.22	2,162.99	1,282.67	31,033.45
Las Marias.....		318.46	429.21	133.47	113.61	12,212.44
Las Piedras.....		822.23	86.82	278.00	271.28	10,256.99
Loíza.....		2,052.12	879.10	1,059.13	372.49	27,063.09
Luquillo.....	16.00	522.91	214.73	432.25	141.00	10,049.23
Manatí.....		6,273.50	770.62	1,650.10	804.29	35,877.06
Maricao.....	409.42	975.22	200.75	80.48	223.06	13,072.12
Maunabo.....	558.00	1,563.95	439.14	563.25	365.07	14,868.56
Mavaguez.....	8,463.00	23,019.29	517.10	14,078.56	1,384.76	111,335.61
Moca.....		337.32	301.91	220.00	50.58	8,231.64
Morón.....		794.82	97.82	756.55	290.47	6,740.22
Naguabo.....	78.00	3,696.24	72.60	1,336.30	528.72	24,439.35
Naranjito.....		642.00	67.98	364.10	61.00	4,945.43
Patillas.....	457.30	1,325.22	105.18	559.50	236.63	15,823.49
Penuelas.....	572.04	1,109.04	403.44	213.34	186.91	10,134.28
Ponce.....	30,859.62	35,208.51	22,797.51	19,570.12	3,302.52	294,189.65
Quebradillas.....		1,135.55	131.81	45.70	228.54	7,180.46
Rincon.....		1,037.80	979.67	37.85	42.92	9,614.30
Río Grande.....		1,773.19	563.56	1,115.00	702.50	20,227.97
Río Piedras.....		7,234.22	334.53	3,369.55	1,274.55	144,106.29
San Juan Grande.....		2,296.88	151.84	117.70	257.03	9,396.13
Solinas.....	2,805.39	2,236.14	842.08	926.62	818.43	41,772.90
San German.....		4,451.55	248.47	2,169.51	1,418.52	32,639.71
San Juan.....	122,496.34	82,336.13	6,239.49	29,409.22	61,853.30	904,787.75
San Lorenzo.....		1,858.47	121.83	904.27	266.74	12,672.65
San Sebastián.....		2,368.73	585.09	1,684.53	195.28	23,952.55
Santa Isabel.....		1,180.44	648.89	859.78	466.48	23,615.14
Toa Alta.....		1,444.92	189.91	305.65	456.58	10,852.68
Toa Pa'a.....		986.74	136.90	196.25	219.66	18,799.24
Trujillo Alto.....		875.66	162.36	61.55	235.61	14,396.66
Ututo.....	1,709.80	3,721.72	936.74	671.05	369.86	41,810.68
Vega Alta.....		1,839.14	34.90	237.10	88.12	12,534.79
Vega Baja.....		3,570.64	458.68	813.00	1,176.76	24,917.89
Vieques.....	173.00	2,698.19	2,310.64	244.98	676.48	45,963.11
Villalba.....	3.90	734.25	151.10	174.50	127.53	6,863.17
Yabucoa.....	1,966.20	3,540.31	231.32	1,939.16	1,491.54	33,608.32
Yauco.....	3,444.00	4,897.90	640.33	3,079.27	2,848.91	75,597.94
Total.....	236,696.95	325,751.87	62,039.97	130,686.98	115,234.32	3,188,280.16

! This amount includes \$43,968.62 transferred from the \$300,000 loan.

Table No. 1.—This table shows the net receipts for the year to be \$2,638,702.08, as compared with \$2,855,487.96 for the previous year, or \$216,785.88 less. This decrease should not be considered as a decline in municipal revenues, as such is not the case. Practically every source of municipal revenue shows a considerable increase, and the decrease in the grand total is due to the fact that the various municipalities during the year under review only borrowed \$306,551.45 against \$733,054.24 for the previous year, or \$431,502.79 less. In the item "Operation of public utilities" the figures for this year are \$256,696.96 against \$221,475.81 for the previous year, or an increase of \$35,221.05. The item "Industrial and commercial licensees" produced this year \$325,751.87, as compared with \$202,035.66, or \$123,716.21 more. The item "Use of municipal property" produced this year \$130,686.98 as compared with \$120,539.46 for the previous year. As will be seen from the above, the sources of revenue, of which the three named are the most important, show a considerable increase, while the decrease is the result of the various corporations having borrowed less than in the previous year.

TABLE No. 2.—Statement of disbursements of the various municipalities of Porto Rico for the fiscal year ending June 30, 1919.

Municipalities.	Cash bond deposits.	Road fund.	Other trust funds.	Repayment of loans.		Salaries.
				Principal.	Interest.	
Adjuntas.....	\$1,235.04	\$1,265.60	.....	.....	.....	\$7,660.37
Aguada.....	.....	1,120.17	.....	.....	.....	6,766.08
Aguadilla.....	.....	1,152.39	.....	\$5,750.00	\$4,497.00	10,411.40
Agua Buenas.....	2,695.00	262.40	\$123.55	300.00	80.02	2,597.01
Albionito.....	180.00	203.94	66.95	1,675.62	494.88	6,170.60
Anasco.....	.....	592.87	.....	1,000.00	45.00	8,414.72
Arecibo.....	2,168.59	8,148.79	5.91	.....	.....	45,497.69
Arroyo.....	21.00	746.00	.....	755.65	120.66	5,905.39
Barceloneta.....	.....	1,164.58	.....	500.00	112.50	7,670.21
Barranquitas.....	.....	136.45	.....	170.91	.....	2,713.32
Barrera.....	.....	548.06	.....	.....	.....	3,719.02
Bayamon.....	.....	1,439.14	346.00	2,000.00	450.00	18,903.34
Cabo Rojo.....	.....	1,574.81	.....	.....	.....	9,747.01
Caguas.....	2,074.42	2,788.30	.....	5,000.00	3,375.00	23,019.128
Camuy.....	286.00	1,118.27	.....	.....	.....	6,380.42
Carolina.....	6,138.00	2,027.16	.....	.....	.....	10,148.16
Cayey.....	355.00	1,777.80	1,154.63	2,500.00	1,675.00	12,228.50
Ceiba.....	850.00	496.38	.....	.....	.....	3,523.30
Ciales.....	123.50	1,387.60	.....	1,500.00	1,012.50	5,831.31
Cidra.....	.....	520.15	.....	.....	.....	3,980.35
Coamo.....	.....	1,337.35	.....	2,500.00	237.50	9,326.03
Comerio.....	2,313.50	958.25	.....	1,000.00	495.00	8,308.96
Corozal.....	130.00	371.47	.....	300.00	180.00	3,483.65
Dorado.....	.....	541.82	.....	500.00	225.00	3,905.30
Fajardo.....	192.88	1,403.66	21,375.55	6,900.00	4,319.25	12,597.57
Guanica.....	.....	2,416.73	.....	1,355.22	823.28	9,048.33
Guayama.....	88.00	1,628.36	508.88	4,521.35	247.50	19,404.43
Guayanilla.....	.....	999.81	.....	1,500.00	765.00	5,959.38
Guaynabo.....	.....	199.20	.....	.....	.....	3,661.44
Guayama.....	440.00	701.59	.....	1,565.00	886.28	6,320.22
Hatillo.....	21.60	974.28	.....	.....	.....	4,964.66
Hormigueros.....	1.00	418.75	.....	.....	.....	3,752.80
Humacao.....	5,636.33	4,151.85	.....	2,250.00	2,265.00	24,784.36
Isabela.....	68.00	662.50	.....	500.00	135.00	5,369.96
Jayuya.....	.....	559.41	.....	500.00	90.00	4,287.79
Juana Diaz.....	6.00	1,964.13	35.07	500.00	281.66	11,422.01
Juncos.....	4,413.63	1,058.19	.....	2,000.00	1,508.00	9,685.74
Lajas.....	1,957.00	1,295.24	.....	.....	.....	7,267.55
Lares.....	1,089.80	1,979.07	.....	3,000.00	2,295.00	6,635.51
Las Marias.....	.....	966.80	.....	.....	.....	5,755.38
Las Piedras.....	.....	199.00	.....	.....	.....	2,994.79
Loiza.....	3,108.00	1,589.46	.....	.....	.....	9,762.67
Luquillo.....	36.00	200.25	.....	.....	.....	3,597.02
Manati.....	5,044.65	2,202.00	.....	.....	.....	13,349.81
Maricao.....	.....	1,062.96	17.65	910.00	180.00	4,813.83
Maunabo.....	1,274.00	561.98	.....	.....	.....	5,258.96
Mayaguez.....	1,556.00	4,520.21	543.61	1,450.64	681.33	45,658.10
Moca.....	.....	585.33	.....	.....	.....	3,480.93
Morristown.....	8.00	407.90	.....	.....	.....	3,565.48
Naguabo.....	350.00	251.90	.....	.....	.....	8,949.72
Narajito.....	.....	195.10	.....	200.00	27.00	2,045.29
Patillas.....	335.00	279.32	25.00	1,604.58	99.94	5,396.27
Penuelas.....	.....	850.97	.....	600.00	533.25	4,120.32
Ponce.....	598.00	8,105.49	49,225.98	27,000.00	21,560.82	111,439.49
Quebradillas.....	.....	586.61	.....	170.00	84.00	3,617.64

TABLE No. 2.—Statement of disbursements of the various municipalities of Porto Rico for the fiscal year ending June 30, 1919—Continued.

Municipalities.	Cash bond deposits.	Road fund.	Other trust funds.	Repayment of loans.		Salaries.
				Principal.	Interest.	
Rincon.		\$200.50				\$3,862.43
Rio Grande.	\$4,826.00	1,119.24				6,777.26
Rio Piedras.	14,866.00	3,394.41		\$2,000.00	\$450.00	19,542.78
Sabana Grande.		475.56				3,915.63
Salinas.		1,762.76	\$12.00	3,000.00	1,012.50	13,456.97
San German.	6,572.89	2,096.63				11,915.66
San Juan.	23,879.73	13,076.86		13,000.00	14,855.63	208,775.00
San Lorenzo.	1,974.00	725.11		250.00	233.82	4,693.00
San Sebastian.	425.00	1,077.34		1,000.00	450.00	7,731.66
Santa Isabel.	15.00	2,085.34				8,257.40
Toa Alta.	2,020.00	526.61		150.00	56.71	3,773.28
Toa Baja.	235.00	1,484.73		1,000.00	360.00	6,036.42
Trujillo Alto.	10.00	816.25				4,346.34
Utua.	15.00	2,495.68		2,000.00	603.40	11,983.07
Vega Alta.		1,262.06		1,000.00	225.00	5,215.76
Vega Baja.	\$03.50	1,509.14	14.00			9,538.45
Vieques.	50.00	1,333.56		1,500.00	1,260.00	10,926.44
Villalba.		485.85				1,832.26
Yabucoa.	1,137.00	1,645.38				12,108.16
Yauco.	625.00	1,900.72		5,043.78	3,961.94	11,566.63
Total.	102,373.06	114,189.84	73,452.78	111,922.75	73,240.71	967,989.89

Municipalities.	Purchases of unexpended property.	Purchases of supplies.	Wages and per diems.	Miscellaneous.	Total.
Adjuntas.	\$401.01	\$4,155.18	\$948.56	\$659.79	\$16,614.55
Aguada.	96.50	3,924.10	1,305.63	578.22	13,791.30
Aguadilla.	254.03	3,247.62	1,300.05	1,961.27	28,573.78
Agua Buenas.	192.29	783.69	291.33	181.68	7,515.97
Albionito.	347.26	2,078.56	1,173.26	676.59	13,067.68
Anasco.	25.19	2,800.70		835.72	13,714.20
Arecibo.	2,334.19	22,565.96	9,430.86	3,831.92	93,983.81
Arroyo.	696.34	8,509.87	900.27	333.10	17,980.38
Barceloneta.	791.73	6,120.86	336.51	519.17	17,215.36
Barranquitas.	144.00	2,250.94		55.80	5,471.42
Barrus.	57.00	1,764.26	262.03	85.91	6,456.26
Bayamon.	593.55	16,158.97	611.37	1,083.62	42,185.99
Cabo Rojo.	438.45	4,551.57	2,548.39	172.70	19,032.98
Caguas.	325.78	14,371.01	4,101.94	1,026.64	56,062.16
Camuy.	738.32	4,525.61		341.71	13,390.33
Carolina.	815.05	4,833.61	1,459.48	846.10	27,767.56
Cayey.	2,109.90	8,199.77	3,162.64	2,410.78	35,474.02
Celba.	154.00	1,757.07	318.67	98.90	7,198.22
Ciales.	138.60	4,471.42	612.13	765.78	15,845.84
Cidra.	469.40	2,081.69	776.60	206.90	8,035.09
Cosamo.	134.72	3,808.19	1,369.74	598.20	19,401.73
Comerio.	1,488.04	5,222.35	1,774.42	531.84	22,092.36
Corral.	62.25	1,747.79	688.49	164.47	7,128.13
Dorado.	91.80	2,249.38	898.58	159.55	8,559.43
Fajardo.	438.06	6,206.06	3,043.14	1,506.49	57,962.68
Guanica.	500.73	6,239.63	961.46	5,658.21	27,078.59
Guayama.	660.98	19,978.13	5,825.00	542.83	53,396.46
Guayanilla.	285.02	4,272.52	1,840.99	489.44	16,112.16
Guaynabo.	403.36	1,575.23	821.10	668.44	7,326.77
Gurabo.	499.45	2,677.40	757.84	576.66	14,424.44
Hatillo.	182.53	1,355.45	868.29	76.22	8,433.66
Hormigueros.	115.55	1,973.44	787.92	490.56	7,540.04
Humacao.	1,828.24	15,126.18	191.89	673.10	56,866.95
Isabela.	128.00	2,344.98	707.20	260.44	10,176.66
Jayuya.	336.00	1,500.70	300.50	399.33	7,943.73
Juana Diaz.	390.84	6,886.85	1,858.82	1,011.90	24,384.18
Juncos.	1,968.37	4,726.06	676.41	748.28	26,824.66
Lajas.	399.66	3,788.30	296.32	492.64	15,479.21
Lares.	2,492.13	6,101.18	1,481.25	316.64	27,260.56
Las Marias.	88.57	2,524.94	1,515.04	301.83	11,152.56
Las Piedras.	279.19	1,223.14	351.19	74.42	5,121.73
Lolita.	209.80	5,031.02	1,193.46	164.60	21,079.08
Luquillo.	142.30	1,896.11	324.76	196.01	6,394.46
Manati.	315.30	9,795.93	2,304.70	487.16	35,499.55
Maricao.	227.72	3,184.62	556.75	100.36	10,753.79
Maunabo.	204.84	2,089.03	330.67	560.34	10,259.84
Mayaguez.	2,946.74	35,228.58	5,461.59	4,073.60	102,120.40

TABLE No. 2.—*Statement of disbursements of the various municipalities of Porto Rico for the fiscal year ending June 30, 1919—Continued.*

Municipalities.	Purchases of unexpendable property.	Purchases of supplies.	Wages and per diems.	Miscellaneous.	Total.
Moca.....	\$278.00	\$2,690.08	\$178.80	\$89.52	\$7,272.70
Moravia.....	292.71	1,712.36	545.82	65.46	6,597.93
Naguabo.....	1,214.18	6,343.49	3,771.27	495.98	21,406.54
Marañito.....		1,059.45	405.00	90.92	4,022.85
Patillas.....	1,874.58	3,337.18	712.19	339.59	14,003.65
Penuelas.....	260.15	2,819.85	69.68	450.20	9,704.40
Ponce.....	16,581.24	37,819.52	6,685.57	5,031.36	284,847.47
Quebradillas.....	176.35	815.04	634.50	820.03	6,854.07
Rincon.....	6.00	3,221.75	667.84	174.43	7,873.04
Rio Grande.....	95.75	3,816.32	1,531.81	278.50	18,444.88
Rio Piedras.....	885.96	14,715.67	508.93	685.11	57,118.86
Salinas.....		2,132.55	557.75	165.53	7,251.02
Salinas.....	254.23	7,564.82	2,152.72	293.09	29,509.09
San German.....	534.61	6,223.00	2,672.33	1,182.89	31,198.03
San Juan.....	202,699.29	234,843.54	62,200.42	163,518.07	831,843.64
San Lorenzo.....	225.00	2,756.21	888.85	85.74	11,831.73
San Sebastian.....	1,524.88	4,971.86	2,855.89	1,311.75	21,348.40
Santa Isabel.....	627.78	4,220.06	975.38	522.35	16,707.31
Ton Alto.....	293.40	2,038.98	601.72	190.92	9,621.62
Ton Paja.....	744.45	5,231.09	1,574.21	510.21	17,268.11
Trujillo Alto.....	115.22	1,333.21	654.81	293.05	7,568.88
Utrero.....	8,920.20	8,014.28	3,556.56	549.39	38,112.56
Vega Alta.....	32.00	2,808.62	118.17	243.55	10,847.01
Vega Baja.....	1,757.64	4,890.83	1,118.17	1,020.52	21,772.25
Vieques.....	965.41	5,282.47	2,404.44	748.99	24,473.85
Villalba.....	180.47	797.88	198.40	86.28	3,631.14
Yabucoa.....	299.26	8,732.14	2,934.48	612.16	27,546.00
Yauco.....	26,822.68	7,767.43	2,746.67	766.35	61,231.20
Total.....	295,036.49	668,017.18	169,621.61	120,368.32	2,686,192.63

† This amount includes \$43,988.62 transferred from the \$300,000 loan to General Fund.

Table No. 2.—This table shows the total disbursements for the year to have been \$2,686,192.63, from which should be deducted the sum of \$43,988.62 transferred, by legislative authority, from the loan funds to the general funds of the municipality of San Juan, thus leaving a net total of \$2,642,204.01 as disbursements for the year, or a decrease of \$46,761.56. This decrease has been accomplished notwithstanding the fact that there was an increase in salaries of \$70,490.55 and \$18,290.02 in the item of interest paid. The principal items accountable for this decrease are "Miscellaneous expenditures," with a decrease of \$91,832.37, and "Purchase of supplies," with a decrease of \$55,417.30.

TABLE No. 3.—*Statement of unexpendable property owned by the municipalities of Porto Rico, as of June 30, 1919.*

Municipalities.	Value of property reported as of June 30, 1918.	Increase during year.	Decrease during year.	Balance June 30, 1919.
Adjuntas.....	\$6,396.02	\$400.26	\$75.00	\$6,711.28
Aguada.....	7,561.45	47.50	5,462.33	2,146.62
Aguadilla.....	48,134.45	3,023.23	42,481.21	5,573.47
Aguas Buenas.....	4,212.26	192.29	2.54	4,411.01
Aibonito.....	2,091.50	52,334.94	66.90	54,360.14
Anas o.....	21,394.80	25.19	17,930.75	3,489.24
Areibo.....	199,763.12	10,949.88		210,713.00
Arroio.....	46,572.66	4,892.90	41.10	51,354.46
Bar cloneta.....	11,614.74	70.20		11,684.94
Barranquitas.....	4,722.66	14,574.00	40.00	19,656.66
Barros.....	3,057.90	3,682.00	10.00	6,749.90
Bayamon.....	47,730.65	754.49	411.49	48,073.65
Cabo Rojo.....	28,333.81	543.25	252.77	28,624.29
Caguas.....	105,314.07	412.68	200.55	105,526.20
Camuy.....	12,767.39	898.18	1,086.35	12,579.22
Carolina.....	6,528.27	319.30	12.12	6,835.45
Cayey.....	78,357.23	9,737.56	588.01	87,506.78
Ceiba.....	2,063.23	817.96	7.00	2,904.19
Ciales.....	45,591.06	164.40	15.70	45,739.76
Cidra.....	2,833.25	471.90	120.00	3,185.15
Coamo.....	80,065.99	140.82	330.00	79,876.81
Comerio.....	28,663.05	2,517.46	272.63	30,907.88

TABLE NO. 3.—*Statement of unexpendable property owned by the municipalities of Porto Rico, as of June 30, 1919—Continued.*

Municipalities.	Value of property reported as of June 30, 1918.	Increase during year.	Decrease during year.	Balance June 30, 1919.
Corozal.....	\$4,601.15	\$62.75		\$4,663.90
Culebra.....	477.93	1.00		478.93
Dorado.....	4,986.51	91.80	\$11.50	5,066.81
Fajardo.....	132,759.85	230.37	93.30	132,896.92
Guanica.....	21,823.27	323.35	12.00	22,134.62
Guayama.....	59,679.37	109,736.63	198.54	169,217.46
Guayanilla.....	21,105.00	1,008.25	50.00	22,063.25
Guaynabo.....	902.45	413.36	68.05	1,247.76
Gurabo.....	40,380.69	512.28	333.31	40,559.66
Hatillo.....	4,268.65	71.40	7.00	4,332.05
Hormigueros.....	5,037.65	38.59		5,076.24
Humacao.....	215,603.66	2,017.10	486.00	217,134.76
Isabela.....	10,365.40	145.57	4,000.00	6,509.97
Jayuya.....	590.60	346.75		937.35
Juana Diaz.....	33,012.58	601.57	241.30	33,372.85
Juncos.....	65,364.03	113.06	123.50	65,353.59
Lajas.....	19,999.69	444.41	26.50	20,417.60
Lares.....	22,586.88	52,016.74	50.00	74,593.62
Las Marias.....	5,246.12	96.97	1,166.59	4,176.50
Las Piedras.....	2,470.80	570.42	18.55	3,022.67
Lola.....	30,583.53	301.35		30,884.88
Luquillo.....	1,218.59	184.46	37.25	1,365.80
Manati.....	16,559.54	325.80		16,885.34
Maricao.....	29,550.83	491.35	119.57	29,922.61
Maunabo.....	15,248.33	865.66	1,130.70	14,983.29
Mayaguez.....	332,335.72	9,110.78		341,446.50
Moca.....	3,061.68	268.00		3,329.68
Morovis.....	3,265.25	260.50		3,525.75
Naguabo.....	11,100.57	254.70	53.75	11,301.52
Naranjito.....	1,719.80	5,171.68		6,891.48
Patillas.....	23,345.63	2,840.91	58.58	26,127.96
Penuelas.....	18,527.38	260.15		18,787.53
Ponce.....	2,047,084.81	2,750.34	1,479.92	2,048,355.23
Quebradillas.....	5,718.70	176.35	80.92	5,814.13
Rincon.....	9,133.20	7.25		9,140.45
Rio Grande.....	8,343.00	188.10	37.00	8,494.10
Rio Piedras.....	54,922.01	740.10	70.00	55,592.11
Sabana Grande.....	3,843.25	13.10		3,856.35
Salinas.....	51,308.19	17,523.13	917.84	67,913.48
San German.....	48,542.37	568.86	144.02	48,967.21
San Juan.....	707,611.12	8,474.52	2,869.59	713,216.05
San Lorenzo.....	13,460.35	383.70	50.00	13,794.05
San Sebastian.....	44,973.44	2,381.75	1,652.32	45,702.87
Santa Isabel.....	14,117.57	3,822.53	191.32	17,748.78
Toa Alta.....	8,463.14	1,186.35	4.75	9,644.74
Toa Baja.....	7,054.35	2,189.61		9,243.96
Trujillo Alto.....	3,774.15	138.72	4.00	3,908.87
Utuado.....	53,487.51	2,789.69	1,040.50	55,236.70
Vega Alta.....	15,317.01	181.75	91.80	15,406.96
Vega Baja.....	20,351.96	24,794.14	1,066.37	44,080.73
Vieques.....	60,511.19	1,043.81	280.42	61,274.58
Villalba.....	138.25	51.00		189.25
Yabucoa.....	55,409.72	361.16		55,770.88
Yauco.....	150,648.88	532.28	806.51	150,374.65
Total.....	5,335,751.86	364,688.41	88,998.12	5,611,442.15
Deduction: Culebra.....	477.93	1.00		478.93
Net total.....	5,335,273.93	364,687.41	88,998.12	5,610,963.25

¹ The value of the property owned by Culebra is being taken up by the division of property accounts under "Culebra Island."

Table No. 3.—This table shows the results of the operations of the system of property accounting established by this office two years ago.

As will be noted by this table, at the close of business on June 30, 1919, the various municipalities owned \$5,610,963.25 worth of property, an amount sufficiently large to warrant a strict accountability therefor.

The decrease of \$88,998.12 represents property which during the year has been destroyed on account of same having become obsolete. In every case this office has had the proper application from the responsible property clerk for inspection and condemnation, and said property has been inspected and passed upon by an inspector appointed by the auditor. In cases where the property has disappeared, such as in the recent earthquakes, or by death of some animal, etc., an affidavit is required from the person responsible to warrant the property being dropped from the records.

TABLE NO. 4.—Statement of receipts and disbursements of the various school boards of Porto Rico for the fiscal year ending June 30, 1919.

RECEIPTS.

School boards.	Balance July 1, 1918.	Proceeds from loans.	School fund.	School tax.	Interest on bank balances.	Miscel- laneous.	Total.
Adjuntas	\$3,494.46		\$3,805.75	\$2,365.95	\$91.62	\$0.75	\$9,758.53
Aguada	2,722.34		3,433.89	1,529.33	42.15	206.75	7,937.46
Aguadilla	1,567.65	\$2,500.00	4,384.11	2,411.49	48.21		10,511.46
Agua Buenas	752.98		1,034.28	803.02	16.15	.79	2,607.22
Aibonito	1,106.86		2,300.39	1,491.92	31.90	110.17	5,041.24
Añasco	2,210.51		3,899.48	2,235.67	43.03	88.04	8,476.73
Arecibo	6,554.98		16,258.84	10,648.95		507.17	33,969.94
Arroyo	1,744.09		3,789.32	187.37	54.22	18.81	5,773.81
Barceloneta	8,331.67		4,604.24	2,892.27	133.59		15,961.77
Barranquitas	750.87		1,087.39	719.81	12.63	18.92	2,589.62
Barros	898.86		1,788.24	1,092.63	28.83	11.45	3,800.01
Bayamon	3,744.53		9,107.36	5,254.72	146.55	138.75	18,389.91
Cabo Rojo	2,211.31		4,529.69	2,692.64	48.31	249.03	9,730.98
Caguas	2,278.38		2,804.23	6,131.58	73.38	10.40	18,287.97
Camuy	4,443.32		2,998.89	1,887.85	40.92	4.84	9,463.82
Carolina	2,030.46		5,354.35	3,688.44	34.24	107.24	11,214.73
Cayey	2,523.56	4,500.00	4,797.71	3,223.41	56.41		15,111.09
Ceiba	1,671.56		1,937.88	1,143.66	35.29		4,788.42
Clares	785.14		3,555.45	2,290.63	10.03	25.63	6,666.88
Cidra	1,133.13		1,715.66	1,098.39	30.58		3,982.76
Coamo	3,606.53		3,733.46	1,877.65	73.32	300.47	9,591.43
Comerio	2,600.16		4,408.40	2,122.75	55.05		9,186.36
Corozal	582.61		1,208.76	858.13	19.02	201.93	2,870.45
Dorado	5,715.73		2,429.96	1,675.58	158.88	34.00	10,014.15
Fajardo	3,276.02	5,000.00	7,722.20	5,041.97	64.08	14.82	21,116.12
Guanica	17.61	30,000.00	8,038.83	5,814.53	157.10	146.03	43,974.10
Guayama	2,352.68		8,594.63	6,062.21	61.82	154.80	17,266.44
Guayanilla	2,465.89		3,873.96	2,063.25	68.83	39.10	8,511.03
Guaynabo	903.80		2,000.77	1,130.13	20.61		4,065.31
Gurabo	419.59		2,717.99	1,478.83	15.07	474.18	5,105.66
Hatillo	1,420.28		2,689.10	1,706.36	42.09		5,857.83
Hormigueros	5,093.20		1,895.14	1,182.83	141.35	6.00	8,296.52
Humacao	906.33		8,025.57	5,003.51	23.34	53.64	14,011.39
Isla de Puer	358.01		2,575.34	1,483.86	20.30	1.80	4,439.31
Isabela	1,757.86		2,014.23	1,399.01	38.76	53.82	5,263.68
Jayuya	8,154.07		5,553.01	4,720.58	281.67	53.55	18,762.88
Juana Diaz	258.33		4,054.19	2,196.05	23.91	100.00	6,632.48
Juncos	2,776.86		3,870.96	2,063.72	55.49	32.96	8,819.96
Lajas	3,074.11		5,166.27	2,633.45	78.37	58.04	11,015.24
Lares	4,422.48		2,707.28	1,902.11	64.51		9,096.38
Las Marias	2,037.09		1,804.12	1,071.73	44.18		4,957.11
Las Piedras	4,165.58		5,367.02	1,752.62	65.87	14.27	11,365.36
Loiza	967.91		2,037.91	1,422.64	23.85	20.96	4,473.27
Luquillo	3,950.98		5,785.42	3,544.37	85.23	40.17	13,406.17
Manati	341.04		3,106.43	1,609.39	12.08	430.00	5,498.58
Maricao	719.14		1,712.06	1,031.40	27.09		3,489.69
Mamabo	31,286.44		16,972.61	9,368.53	779.52	1,535.55	59,937.65
Mayaguez	1,301.25		2,024.75	965.71	11.06		4,302.77
Moca	64.08		1,534.74	952.10	3.37	9.57	2,563.86
Morovis	223.28		3,990.05	2,696.26	14.20		6,923.79
Maguabo	847.32		796.80	543.43	19.05	50.00	2,256.60
Naranjito	1,851.47		3,035.96	1,889.20	65.86	8.95	6,831.44
Patillas	377.38		2,454.14	1,405.76	24.02	11.39	4,272.69
Penuelas	3,688.75		34,106.37	18,578.69	92.40	64.11	56,530.32
Ponce	635.35		1,667.57	990.24	28.17	39.35	3,358.68
Quebradillas	284.93		1,779.29	1,114.18	11.33	42.00	3,231.73
Rincon	1,676.62		3,490.89	2,256.38	21.44	10.72	7,459.05
Rio Grande	7,551.72		9,995.87	5,476.80	284.14		23,308.53
Rio Piedras	461.98		1,531.28	857.68	17.37		2,868.31
Sabana Grande	6,683.78		9,860.31	5,090.88	106.39	18.00	21,759.36
Salinas	2,656.17		5,251.14	3,093.85	73.11	46.15	11,120.42
San German	142,575.85		69,698.76	40,958.08	4,005.23	149.03	257,386.96
San Juan	842.61		2,084.18	1,255.65	11.21	10.40	4,203.95
San Lorenzo	4,032.34		4,482.57	2,194.38	87.12	8.60	10,805.01
San Sebastain	6,031.20		5,138.56	4,140.70	149.59	23	15,460.28
Santa Isabel	1,543.70		1,632.37	984.79	47.65	1.30	4,209.81
Toa Alta	2,405.93		4,390.06	2,418.43	35.71	13.41	9,263.54
Toa Baja	2,632.29		2,215.34	1,246.44	48.59		6,142.66
Trujillo Alto	3,204.63		6,472.43	3,305.80	37.33	205.39	13,225.48
Utua	1,833.47		2,706.34	2,421.39	27.54		7,078.74
Vega Alta	1,982.30		4,592.42	2,587.20	42.27	25	9,204.50
Vega Baja	10,689.71		6,282.31	3,707.41	131.06	37.38	20,847.87
Vieques	864.55		1,233.32	907.14	37.88	719.27	3,762.16
Villalba	1,353.23		4,744.90	3,813.62	47.85		9,989.60
Yabucoa	1,364.46		5,910.60	3,208.91	38.11	40.00	10,562.06
Total	354,281.52	42,000.00	413,394.14	244,958.01	8,999.48	6,791.36	1,070,424.51

TABLE NO. 4.—Statement of receipts and disbursements of the various school boards Porto Rico for the fiscal year ending June 30, 1919—Continued.

DISBURSEMENTS.

School boards.	Salaries.	Rent of schoolhouses	Purchases of unexpended property.	Purchases of supplies.	Miscellaneous.	Total.
Adjuntas.....	\$1,224.73	\$2,831.06	\$1,394.28	\$241.07	\$267.73	\$5,958.87
Aguada.....	1,180.66	1,349.00	820.49	1,075.53	1,315.39	5,761.07
Aguadilla.....	1,401.33	1,792.35	570.63	3,977.40	2,304.57	10,046.28
Agua Buenas.....	327.09	538.00	240.02	616.19	209.61	1,930.91
Aibonito.....	620.17	1,435.00	404.13	427.71	959.72	3,846.73
Añasco.....	1,244.12	1,441.99	2,590.89	554.68	1,111.77	6,943.45
Arecibo.....	4,251.27	3,506.00	5,196.54	9,046.92	2,639.31	24,643.04
Arroyo.....	753.54	1,324.00	577.65	704.43	78.10	3,437.92
Barceloneta.....	1,646.15	1,897.12	7,476.98	466.58	381.84	11,879.67
Barranquitas.....	299.83	788.00	343.95	98.49	105.05	1,635.32
Barros.....	550.57	1,163.00	1,127.54	212.63	355.55	3,415.19
Bayamon.....	2,689.74	5,517.48	2,348.00	1,696.38	1,636.92	13,888.52
Cabo Rojo.....	1,711.31	3,729.00	1,835.40	774.95	268.14	8,318.80
Caguas.....	2,625.13	7,444.50	3,342.75	2,229.56	1,424.72	17,066.65
Camuy.....	1,312.90	516.50	3,934.24	1,702.76	1,030.23	8,496.63
Canina.....	1,112.89	2,282.00	2,176.35	1,003.93	865.22	7,560.41
Cavey.....	1,156.88	1,676.00	6,385.05	1,251.88	2,254.85	12,724.71
Ceballos.....	386.71	1,140.00	1,277.24	199.07	613.82	3,616.84
Cidra.....	845.87	2,267.00	370.25	872.97	907.65	5,163.74
Chiriqui.....	452.56	1,528.00	230.50	561.87	365.40	3,138.33
Coamo.....	1,299.53	2,925.62	1,533.37	1,837.22	380.71	8,076.45
Cimarron.....	1,420.10	1,668.00	849.52	2,325.85	808.42	7,159.92
Corozal.....	381.24	465.00	114.65	585.50	580.01	2,126.45
Dorado.....	412.80	1,559.33	488.26	281.89	379.21	3,121.49
Fajardo.....	2,899.12	2,560.00	5,649.52	2,819.30	965.73	10,507.17
Guánica.....	3,323.70	1,547.25	4,210.78	863.54	561.79	10,507.06
Guayama.....	2,498.48	3,628.98	2,917.37	2,114.39	670.65	11,829.27
Guayanilla.....	1,040.31	1,669.80	699.86	1,130.25	577.82	5,118.04
Guaynabo.....	555.47	1,496.00	481.48	407.21	524.16	3,434.32
Gurabo.....	736.50	1,639.60	204.23	418.79	1,887.95	4,887.07
Hatillo.....	820.14	468.00	877.43	813.20	179.51	2,658.38
Hormigueros.....	577.23	970.00	169.40	98.71	226.69	2,042.03
Humacao.....	2,196.23	2,844.00	1,183.72	1,794.84	5,055.79	13,074.78
Isabela.....	614.80	1,694.00	497.20	566.02	413.49	3,755.51
Jayuya.....	621.95	1,925.00	733.58	164.19	406.15	3,850.77
Juana Diaz.....	1,844.88	1,542.00	536.19	885.01	1,222.62	6,030.60
Juncos.....	1,085.03	2,925.10	132.62	464.13	118.71	4,725.59
Lajas.....	1,085.28	1,012.45	1,435.26	787.83	326.11	4,646.93
Lares.....	1,586.51	2,907.00	1,500.03	763.76	847.24	7,604.54
Las Marias.....	794.05	1,482.00	1,046.34	1,339.05	419.27	5,079.61
Las Piedras.....	792.13	921.00	829.17	120.06	191.63	2,833.09
Lola.....	1,294.02	2,250.00	2,494.82	1,170.30	1,000.57	8,211.71
Luquillo.....	385.00	1,386.00	332.45	165.92	1,276.93	3,546.30
Manati.....	1,895.65	3,407.00	3,964.93	1,583.82	819.08	11,670.46
Maricao.....	1,299.50	1,534.00	998.40	571.10	564.21	4,957.61
Mauabo.....	760.75	1,019.00	281.03	333.13	477.00	2,880.91
Mayaguez.....	8,074.23	1,337.00	33,529.38	3,683.32	10,322.09	56,946.02
Moca.....	898.95	957.50	71.04	560.27	275.83	2,763.59
Morovis.....	332.03	1,096.00	218.01	277.87	323.76	2,268.67
Naguabo.....	736.55	1,572.00	584.28	206.36	2,317.40	5,416.59
Naranjo.....	312.59	399.00	593.25	49.35	321.72	1,674.91
Patillas.....	770.49	2,180.00	316.76	1,061.10	386.13	4,714.48
Pedraza.....	616.10	1,660.00	478.92	180.60	231.50	3,167.12
Ponce.....	9,038.02	5,651.40	1,569.03	7,413.87	22,037.84	45,710.16
Quebradillas.....	620.57	891.67	533.34	645.85	132.44	2,826.47
Rincon.....	631.98	1,034.00	187.92	260.94	601.66	2,716.50
Rio Grande.....	774.61	1,895.65	65.87	541.83	389.14	3,667.00
Rio Piedras.....	2,527.07	1,692.00	1,212.02	2,012.36	617.63	8,061.08
Sabana Grande.....	483.25	1,340.00	48.18	211.86	65.12	2,168.41
Salinas.....	3,670.70	1,091.99	6,882.24	1,591.42	331.41	13,567.34
San German.....	1,980.33	3,334.50	1,136.07	1,728.71	815.62	8,995.13
San Juan.....	21,526.49	5,920.00	94,473.60	12,134.48	48,386.56	182,420.13
San Lorenzo.....	401.71	1,131.00	506.30	312.95	678.28	3,030.24
San Sebastian.....	1,080.48	2,770.75	716.09	614.50	489.15	5,680.97
Santa Isabel.....	3,106.04	108.00	3,086.78	826.50	580.56	7,709.28
Toa Alta.....	371.12	439.50	449.64	729.95	314.39	2,294.60
Toa Baja.....	1,446.76	1,623.00	2,476.00	875.02	874.24	7,295.02
Trujillo Alto.....	666.60	900.00	1,753.12	328.15	579.25	4,207.12
Utua.....	1,375.74	3,598.00	667.56	1,499.05	2,798.77	9,940.12
Vega Alta.....	1,111.67	600.00	1,227.26	540.80	1,000.22	4,580.95
Vega Baja.....	1,248.47	2,120.66	1,449.63	1,037.81	391.55	6,248.12
Vieques.....	2,236.55	1,313.85	1,298.55	11,116.34	393.40	16,364.69
Villalba.....	73.90	1,260.00	166.50	9.45	47.50	1,557.35
Yabucoa.....	1,676.21	3,628.40	2,136.44	1,063.67	321.20	8,845.76
Yauco.....	2,262.68	2,168.00	2,202.06	2,317.25	755.78	9,708.77
Total.....	128,117.23	145,850.00	236,300.93	106,200.42	136,656.98	753,135.56

Table No. 4.—This table shows the receipts and disbursements of the 75 school boards of the island. The total net receipts are \$716,142.99, as compared with \$660,789.83, or an increase of \$55,353.14 as compared with last year's figures. This increase is accounted for as follows:

Increase in loans.....	\$11,880.46
Increase in school fund.....	17,192.00
Increase in school tax.....	25,742.26
Increase in miscellaneous.....	4,492.24
Gross increase.....	59,306.96
Less decrease in interest on bank balances.....	3,953.82
Net increase.....	55,353.14

The total disbursements for the year are \$753,134.56, as compared with \$835,942.91 for last year, or \$82,808.35 decrease. This decrease was accomplished notwithstanding the fact of there having been expenditures of \$13,003.40 in salaries more than last year, \$23,527.82 in rents, and \$47,526.90 in supplies purchased. Where, then, is this decrease in expenditures accomplished? This question is answered by a decrease of \$145,626.65 in purchases of unexpendable property and \$21,239.82 in other miscellaneous expenditures. While there may be many reasons to explain the economy shown in the item of purchase of unexpendable property, the main reasons are, in our opinion, the fact that in the previous year a greater number of schools were equipped, and to the fact that a strict accountability has been kept of all school board property, thus making tools, furniture, and utensils available for a longer period.

TABLE No. 5.—Statement of unexpendable property owned by the school boards of Porto Rico as of June 30, 1919.

School boards.	Value of property reported as of June 30, 1918.	Increase during year.	Decrease during year.	Balance June 30, 1919.
Adjuntas.....	\$20,632.91	\$1,240.52		\$21,873.43
Agüada.....	18,819.52			18,819.52
Agua Fria.....		125,578.54		25,578.54
Agua Buenas.....	7,716.90	237.62		7,954.52
Albionito.....	19,232.91	1,258.58	\$261.22	20,230.27
Añasco.....		129,387.37		29,387.37
Arecibo.....	145,910.13			145,910.13
Arroyo.....	21,137.24	2,024.54	94.30	23,067.48
Barceloneta.....	10,398.78	5,473.70		16,072.48
Barranquitas.....	13,233.90	981.68		14,215.58
Barriles.....	15,634.58	1,776.50		17,411.08
Bayamon.....		118,138.81		18,138.81
Cabo Rojo.....		123,615.50		23,615.50
Caguas.....	46,316.42	3,190.20		49,506.62
Camaguey.....	25,650.59	3,522.24		29,172.83
Carolina.....	26,201.20	2,149.38	258.75	28,091.83
Cayey.....	26,298.32	36,089.86		62,388.18
Ciego.....	2,362.55	1,440.45		3,803.00
Ciales.....	18,670.90	995.95	3.00	19,663.85
Cidra.....		17,821.00	180.00	7,641.00
Cidra.....	31,957.53	1,833.37		33,490.90
Cimarron.....	18,157.87	2,089.00	43.10	20,213.77
Coral.....	12,147.34	114.65		12,261.99
Dorado.....		16,550.38		6,550.38
Puerto Rico.....	45,269.88	15,649.52	17.45	60,901.95
Guayama.....	21,538.75	5,994.23	.30	27,502.68
Guayama.....	52,585.70	7,440.95	1,721.83	57,904.82
Guayama.....	17,778.53	801.86	84.98	18,490.41
Guayama.....	4,098.62	1,205.88	649.95	4,654.55
Guayama.....	8,016.04	8.89		8,024.93
Hatillo.....	13,180.70	377.43		13,558.13
Hormigueros.....	1,483.81	169.40		1,653.21
Humacao.....		165,710.12	119.45	65,640.67
Isabela.....		112,217.85		12,217.85
Jayuya.....	2,834.36	139.05		2,973.41
Juana Diaz.....	52,152.54	539.19	15.00	52,673.73
Juneau.....	13,357.27	275.95		13,633.22
Lares.....	26,190.66	1,396.14		27,586.80
Lares.....	19,986.94	1,634.08		21,641.02
Las Marias.....		16,249.34	1,000.00	15,249.34
Las Plumas.....	6,493.17	859.37		7,352.54
Lula.....	14,955.35	2,503.82	881.50	16,577.67
Luzon.....	2,837.69	1,074.85	14.60	3,895.94
Manati.....	32,295.10	8,834.76	10.71	38,119.15
Maricao.....	19,257.75	201.32		19,459.07
Mayaguez.....	9,580.27	973.30		10,553.57

¹ Amount of first inventory included because same was submitted after closing of last year's records.

TABLE NO. 5.—*Statement of unexpendable property owned by the school boards of Porto Rico as of June 30, 1919.*

School boards.	Value of property reported as of June 30, 1918.	Increase during year.	Decrease during year.	Balance June 30, 1919.
Mayaguez.....	\$165,397.59	\$33,529.08	\$1,275.00	\$197,651.67
Moca.....	10,609.04	73.67		10,682.71
Morovis.....	4,706.55	218.91		4,925.46
Naguabo.....	27,204.46	70.78		27,275.24
Naranjito.....	4,644.15	1,800.65		6,444.80
Patillas.....		12,599.77		12,599.77
Peñuelas.....	7,018.59	887.84	2.00	7,904.43
Ponce.....		505,990.56		505,990.56
Quebradillas.....		12,185.41	5.56	12,179.85
Rincón.....	10,498.75	528.33		11,027.08
Río Grande.....	32,376.11	133.01		32,509.12
Río Piedras.....	70,011.96	3,830.31		73,842.27
Sabana Grande.....	17,287.91	23.31		17,311.22
Salinas.....		147,346.15	117.00	173,759.15
San German.....	38,290.57	1,137.24	414.41	38,003.40
San Juan.....	603,313.94	193,184.77		796,498.71
San Lorenzo.....	11,376.04	637.45		12,013.49
San Sebastian.....	17,356.09	3,313.77		20,670.46
Santa Isabel.....	41,260.52	9,428.63	321.62	50,367.53
Toa Alta.....	17,307.46	621.29		17,928.75
Toa Baja.....	14,338.59	1,713.62	5.80	16,046.41
Trujillo Alto.....	6,727.00	1,936.15		8,663.15
Utua.....	34,213.80	1,369.08		35,582.88
Vega Alta.....	15,408.14	1,230.26		16,638.40
Vega Baja.....		8,745.03		8,745.03
Vieques.....	42,263.44	1,390.56	21.72	43,632.28
Villalba.....	153.46	946.55		1,100.01
Yabucoa.....	23,159.00	2,508.49	.20	25,667.29
Yauco.....	60,588.97	171.65		60,760.62
Total.....	2,119,993.45	1,161,235.46	7,524.45	3,273,704.46

¹ Amount of first inventory included because same was submitted after closing of last year's records.

Table No. 5.—As promised in our report for last year we are able to present this year in our report a complete record of the properties owned by all the school boards of the island, showing the aggregate property valuation to be \$3,273,704.46, a figure which represents the amounts invested by the various boards in permanent equipment for scholastic purposes.

Besides the work stated above, relating to the municipalities and school boards, this division is charged with the audit and settlement of the accounts of the collectors of internal revenue, of which there are 68, and also the accounts of the various stamp agents, of which there are 7 in the island. The result of this work is shown in the various consolidated statements which follow, together with the general work of the office and the other departments.

The passage of the new municipal law whereby the municipal governments and school boards are reorganized on a different basis than those on which they have been operating heretofore, will cause a readjustment of the system of accounting now in force and most of this work will devolve upon this division, even though it is expected that the whole office force and the various departments will cooperate in accomplishing the best results.

DIVISION OF EXAMINATIONS.

During the past fiscal year this division, in the way of field work, made thorough examinations of the accounts of 73 municipalities, 2 district courts, 23 school boards, 68 offices of collectors of internal revenue, and 7 offices of internal revenue stamp agents. The offices of collectors of internal revenue and stamp agents were examined twice in the course of the year.

Only one serious case of embezzlement was disclosed during the year, in the examination of the accounts of a collector of internal revenue, who was prosecuted and, having pleaded guilty, was sentenced to a term of two years in the penitentiary.

In addition to the above work the division was called upon to make several special investigations. One of the most important special engagements during the fiscal year 1918-19 consisted in bringing up to date the accounts of the bureau of supplies, printing, and transportation and in devising a new system of accounts therefor to adapt it to the law of 1916 providing for a general reorganization of the bureau and for its operation at cost. The new system was installed on July 1, 1919, and at the

present writing it has been satisfactorily in operation for two months. Upon resignation of the accountant of the bureau at the beginning of the fiscal year 1918-19 it proved difficult to find a competent man to fill his place immediately; two or three employees occupied the position for short periods and worked on the auxiliary books, neglecting the important part of journalizing the entries therein and posting to the general ledger. Complying with request from the executive secretary, an exhaustive revision was made of the accounting system and, upon finding that it was not satisfactory, a careful study was made of the needs of the bureau in this respect, the result being the installation of a new system which, after a thorough trial, has been found to be entirely satisfactory.

With the approval of the new municipal law it will be necessary to prepare a new system of municipal accounting as well as new regulations governing same. In this connection the experience obtained by this division from the examination of the accounts of the municipalities and school boards will be of great advantage in devising the new accounting system and regulations.

Recommendations have already been made during the year toward eliminating considerable duplication of work and unnecessary loss of time, with the view of giving municipal controllers a more efficient control of the municipal income and expenditures, thus facilitating the examinations carried out by this division and avoiding a great deal of useless checking. Following these recommendations, it will be possible to exhibit in annual reports more extensive details of the financial affairs of the municipalities of the island, showing the revenues distributed according to the sources of income and the expenditures in accordance with the various functions undertaken, based on the plan followed by the Bureau of the Census of the United States for reporting the financial statistics of municipalities.

DIVISION OF PROPERTY ACCOUNTS.

One hundred accountable property clerks rendered returns directly to this office during the fiscal year. The account of the insular food commission was discontinued and that of the San Juan Harbor bulkhead set up on the records of the division.

The total value of property standing charged against all property clerks on June 30, 1919, aggregates \$1,751,344.80. As property is charged to an account when received and before it is paid for, it should be borne in mind that there is necessarily a difference between actual property on hand and that appearing in the general ledger, which shows only such property as has been paid for. On the date mentioned the difference amounted to some \$5,000, representing bills in transit for property received and remaining unpaid.

The system of accounting for property is described in regulations in force since July 1, 1915, as modified by subsequent legislation.

In the report for the fiscal year 1918-19 attention was invited to the necessity of providing in the budget for a traveling inspector at an annual salary of \$1,800 to take care of periodical examinations and check of property and of the corresponding accounts. This necessity has been more evident during the course of the past fiscal year, due to the repetition of cases disclosing discrepancies upon transferring accounts to succeeding property clerks. All kinds of efforts have been made aiming to prevent such differences, but with the present force it is impossible to overcome the situation. Consequently it is earnestly recommended that this case be brought to the attention of the legislature at its next session, with request that provision be made for a traveling inspector in the division of examinations, in order to permit of that division carrying out recommendations made above.

TABLE NO. 6.—Balance of unexpended property June 30, 1919.

Agriculture and labor, office of the commissioner.....	\$3,384.65	District court:	
Insular forest service.....	336.78	Aguadilla.....	\$7,056.85
Office of the auditor of Porto Rico.....	10,070.71	Arecibo.....	5,534.78
Blind asylum.....	4,556.67	Guayama.....	6,952.91
Boys' charity school.....	21,161.44	Humacao.....	6,623.35
Bureau of agriculture.....	2,792.09	Mayaguez.....	8,985.50
Bureau of labor.....	3,213.97	Ponce.....	7,768.19
Bureau of translation.....	3,303.01	San Juan.....	9,643.33
Carnegie Library.....	26,024.86	Municipal court:	
Civil service commission.....	2,938.69	Adjuntas.....	579.34
Culebra Island.....	535.43	Aguadilla.....	856.47
Department of education.....	478,643.71	Anasco.....	507.06
Books.....	\$393,521.25	Arecibo.....	891.85
Property.....	85,122.46	Barros.....	666.98
Boards of examiners.....	863.60	Bayamon.....	1,431.41
Office of the executive secretary.....	22,676.94	Cabo Rojo.....	637.98
Executive man. com.....	6,804.79	Caguas.....	698.41
Experiment station.....	12,576.10	Camuy.....	565.48
Department of finance.....	38,552.92	Carolina.....	649.28
Food commission.....	4,448.77	Cayey.....	742.20
Girls' charity school.....	6,159.29	Ciales.....	561.82
Office of the governor.....	10,937.97	Coamo.....	433.31
Harbor board.....	1,717.67	Fajardo.....	616.43
Harbor board bulkhead.....	2,371.45	Guayama.....	895.40
Department of health.....	78,674.04	Humacao.....	754.46
Books.....	\$2,691.04	Junta Diaz.....	559.00
Property.....	75,883.00	Lares.....	474.14
House of Representatives.....	8,370.48	Manati.....	790.67
Books.....	\$1,415.86	Mayaguez.....	690.32
Property.....	6,954.62	Patillas.....	468.71
Insane asylum.....	10,111.30	Ponce.....	1,348.51
Interior department.....	258,441.19	Rio Grande.....	538.39
Irrigation service.....	100,870.12	Rio Piedras.....	545.68
Insular police department.....	65,717.10	Salinas.....	647.18
Uniforms, insular police.....	20,293.98	San German.....	668.14
Public service commission.....	2,291.36	San Juan.....	1,771.45
Secretary-reporter, supreme court.....	40,835.78	San Lorenzo.....	444.04
Books.....	\$38,890.00	San Sebastian.....	562.19
Property.....	1,975.78	Utua.....	896.44
Senate of Porto Rico.....	6,052.60	Vera Baja.....	669.83
Insular telegraph.....	31,888.17	Vieques.....	567.30
Institute of tropical medicine.....	6,872.25	Yabucoa.....	616.52
University of Rio Piedras.....	53,214.01	Yauco.....	610.46
Books.....	\$17,483.89	Registrar of property:	
Property.....	35,730.12	Aguadilla.....	625.79
University of Mayaguez.....	99,635.55	Arecibo.....	392.65
Books.....	\$47,408.42	Caguas.....	896.70
Property.....	52,227.13	Guayama.....	828.49
Workmen's relief commission.....	1,573.29	Humacao.....	724.06
Weights and measure.....	9,151.20	Mayaguez.....	465.62
Bureau of supplies, printing, and transportation.....	100,845.64	Ponce.....	719.02
Own property.....	\$80,746.66	San German.....	615.57
Surplus property.....	20,098.98	San Juan (Sec. I).....	971.40
Office of the attorney general.....	33,478.97	San Juan (Sec. II).....	702.09
Books.....	\$23,778.14	District jail:	
Property.....	9,700.83	Aguadilla.....	733.53
Supreme Court of Porto Rico.....	48,392.24	Arecibo.....	2,977.32
Books.....	\$39,210.90	Guayama.....	874.10
Property.....	9,181.34	Humacao.....	1,235.23
		Mayaguez.....	1,883.30
		Ponce.....	2,279.31
		San Juan.....	1,941.80
		Penitentiary.....	8,008.35
		Reform school.....	9,496.91
		Total.....	1,751,344.80

OFFICE FORCE.

Numerous changes took place during the year in the personnel of the office. The position of assistant auditor became vacant on January 10, 1919, and his successor was appointed, effective as of the following day. Seven other employees tendered their resignations to accept positions with commercial concerns. These resignations prove that offers from different sources are still of greater inducement than the compensation allowed to Government employees, the former depriving the administration of the valuable services of experienced men.

All employees have heartily cooperated in the work of the office, efficiently performing their duties, and I desire to express my sincere appreciation of their valuable efforts, which carried the office successfully through a year of increased activities.

Respectfully submitted,

J. W. BONNER,
Auditor of Porto Rico.

The honorable the GOVERNOR OF PORTO RICO,
San Juan, Porto Rico.

CONSOLIDATED FINANCIAL EXHIBITS.

EXHIBIT No. 1.—Statement of assets and liabilities as of June 30, 1919.

Current assets:		
Cash in banks (see Exhibit No. 24).....	\$3,817,235.27	
Remittances in transit (see Exhibit No. 24).....	503,619.17	
Municipal and school board bonds owned (see Exhibit No. 9).....	1,676,500.00	
Accounts receivable.....	\$141,005.68	
Less reserve for departmental accounts payable to bureau of supplies.....	94,019.33	
		46,986.35
Bond redemption fund—		
Cash in banks (included in "Cash in banks" above) (see Exhibit No. 14).....	1,121,521.93	
Taxes paid under protest.....	17,425.66	
Taxes uncollected.....	4,965.04	
Total.....	1,143,912.63	
Less amortization of premium.....	2,598.76	
		1,141,313.87
Material and supplies.....		146,858.38
Delinquent taxes, fiscal years 1901-2 to 1918-19, inclusive, (see Exhibit No. 19).....		67,807.88
Outstanding collections in arrears.....		2,332.96
Irrigation revenues.....		3,985.78
		<u>\$7,406,639.66</u>
Deferred assets:		
Loans to municipalities (see Exhibit No. 6).....	\$135,849.64	
Less reserve for municipal loan account.....	1,000.00	
		134,849.64
Loans to school boards (see Exhibit No. 7).....		799.99
School building construction (see Exhibit No. 8).....		27,796.91
		<u>163,449.54</u>
Invested assets:		
Road and bridge construction (see Exhibit No. 10).....	8,891,419.38	
Real estate (see Exhibit No. 11).....	6,074,179.61	
Public buildings (see Exhibit No. 12).....	1,832,534.98	
Irrigation works.....	4,850,146.18	
Harbor improvements.....	559,303.58	
Telegraph and telephone lines.....	149,749.60	
Furniture and equipment.....	\$1,461,757.42	
Less reserve for depreciation.....	793,154.24	
		668,603.18
		<u>22,034,936.49</u>
Trust fund reserve account:		
Road bond fund of 1916.....	304,704.26	
Irrigation fund.....	85,762.55	
Construction of harbor improvements at San Juan.....	40,946.44	
San Juan Harbor fund.....	3,595.13	
Securities, refunding bonds fund.....	1,260,500.00	
Securities, loan fund.....	401,000.00	
		<u>2,996,528.38</u>
Discount on bonds:		
Public improvement bonds.....	34,821.53	
Refunding bonds.....	19,422.87	
Road bonds of 1916.....	6,163.76	
		<u>60,408.16</u>
University of Porto Rico (see Exhibit No. 15).....		333,031.45
Total.....		<u><u>32,004,963.68</u></u>
Current liabilities:		
Audited vouchers.....	975,038.08	
Unclaimed wages.....	1,475.63	
Franchise deposits.....	1,041.38	
Bureau of supplies, accounts payable.....	64,362.16	
Notes payable.....	540,000.00	
Surplus of irrigation service from operation under provisions of temporary irrigation districts.....	124,144.04	
		<u>1,706,061.29</u>
Deferred liabilities:		
Expenses accrued not paid.....	2,122.48	
Municipalities, tax account.....	50,964.08	
School boards, tax account.....	24,297.68	
Special deposits.....	27,606.39	
		<u>113,990.63</u>

¹ Carried as cash by treasurer in accordance with act No. 120, approved July 26, 1913.

Contingent liabilities:	
Cash bond deposits.....	\$6,016.26
Taxes paid under protest.....	361,168.87
	<u>\$367,185.13</u>
Trust fund liabilities (see Exhibit No. 13).....	3,814,667.39
Bonded debt (see Exhibit No. 14).....	9,516,000.00
Premium on bonds.....	40,402.29
Trustees University of Porto Rico (see Exhibit No. 15).....	333,081.45
Excess of assets over liabilities (see Exhibit No. 2).....	16,203,625.50
Total.....	32,094,963.68

EXHIBIT No. 2.—Account of The People of Porto Rico for the fiscal year ending June 30, 1919.

Surplus of July 1, 1918.....	\$15,836,024.31
Net surplus for current year (see Exhibit No. 3).....	84,178.12
Additions to real estate.....	42,421.04
Additions to buildings.....	91,415.00
Additions to inventory of miscellaneous property.....	9,563.22
Addition to insular bond redemption.....	219,766.51
Sale of insular government property.....	4,518.43
Income of previous years.....	9,266.28
Sundry adjustments.....	1,683.71
Total.....	16,298,826.72
Departmental accounts due bureau of supplies, printing, and transportation, expenses undistributed.	
Public schools donated by the department of education.....	94,019.33
Net lost insular police uniform.....	896.36
Excess of assets over liabilities.....	245.53
Total.....	16,203,625.50
Total.....	16,298,826.72

EXHIBIT No. 3.—Income account for the year ending June 30, 1919.

Insular revenues (see Exhibit No. 4).....	\$5,842,929.19
Insular expenses (see Exhibit No. 5):	
Current-year expenses.....	\$5,331,707.96
Depreciation of furniture and equipment, current year.....	156,536.07
	<u>5,488,244.03</u>
Surplus of current year.....	354,685.16
Reduction of surplus:	
Interest on \$1,000,000 of 4 per cent road bonds of 1916, plus amortization.....	31,782.89
Interest on \$1,225,000 of 4 per cent refunding bonds, plus amortization.....	49,722.55
Interest on \$1,000,000 of 4 per cent public improvement bonds, plus amortization.....	41,119.31
Interest on loans.....	16,830.55
Expenses of previous years, charged out in current year.....	131,051.74
	<u>270,507.04</u>
Net surplus.....	84,178.12

EXHIBIT No. 4.—Comparative statement of accrued insular revenues for the fiscal years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash receipts, Exhibits Nos. 22 and 27.)

Source.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
United States internal revenue.....	\$929,571.03	\$1,039,685.40		\$110,114.37
Customs.....	355,000.00	370,000.00		15,000.00
Excise taxes.....	2,262,452.78	1,998,952.16	\$263,500.62	
Property taxes, insular proportion.....	819,103.85	658,133.39	160,970.46	
Proportion of municipal income for sanitation.....	122,479.88	119,726.05	2,753.83	
Registration of documents.....	96,339.50	94,057.94	2,281.56	
Inheritance taxes.....	42,411.05	52,706.56		10,295.51
Taxes on insurance premiums.....	33,896.26	30,065.33	3,830.93	
Royalties on franchises.....	8,013.04	8,833.48		820.44
Court fees and fines.....	40,778.22	42,067.04		1,288.82
Harbor and dock fees.....	22,545.82	24,376.77		1,830.95
Miscellaneous fees.....	1,517.00	1,992.50		475.50
Foreign corporation license fees.....	4,200.00	4,075.00	125.00	
Rent of property.....	17,803.08	16,063.43	1,739.65	
Telegraph and telephone receipts.....	109,591.26	96,825.98	12,765.28	
Interest on loans to municipalities and school boards.....	83,369.10	81,730.61	1,638.49	
Interest on bank deposits ¹	85,800.23	73,446.61	12,353.62	
Canon on mines.....	792.86	792.86		
Income tax.....	802,311.56	566,818.86	235,492.70	
Miscellaneous.....	4,952.67	15,179.34		10,226.67
	<u>\$5,842,929.19</u>	<u>\$5,295,549.31</u>	<u>547,379.88</u>	

¹ Does not include interest on irrigation fund and university agricultural fund.

EXHIBIT No. 5.—*Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)*

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
LEGISLATIVE.				
Executive council:				
Salaries.....		\$2,085.58		\$2,085.58
Incidentals.....		186.55		186.55
Franchise investigations.....		501.31		501.31
Total, executive council.....		2,773.44		2,773.44
House of delegates:				
Salaries.....		1,651.98		1,651.98
Incidentals.....		5.62		5.62
Total, house of delegates.....		1,657.60		1,657.60
Senate of Porto Rico:				
Salaries.....	\$27,259.91	27,423.78		163.87
Furniture.....		1.00		1.00
Legislative printing.....	575.54	2,503.83		1,928.29
Incidentals.....	3,840.90	2,975.56	\$865.34	
Compensation to members when in special session.....	1,260.00	1,386.00		126.00
Mileage for members.....	425.20	575.80		150.60
Temporary employees.....	1,953.56		1,953.56	
Total, senate of Porto Rico.....	35,315.11	34,865.97	449.14	
House of representatives:				
Salaries.....	40,843.95	40,680.44	163.51	
Mileage for members.....	1,229.30	1,412.80		183.50
Legislative printing.....	271.04	3,588.36		3,317.32
Incidentals.....	3,821.78	2,965.20	856.58	
Furniture, books, and library equipment.....	10.00	356.00		346.00
Temporary employees.....	1,975.63		1,975.63	
Total, house of representatives.....	48,151.70	49,002.80		851.10
Total legislative.....	83,466.81	88,299.81		4,833.00
EXECUTIVE.				
Governor:				
Salaries.....	15,207.50	15,929.00		721.50
Expenses, Executive Mansion.....	10,960.02	11,239.79		279.77
Stationery and printing.....	1,283.91	1,190.83	93.08	
Telegraph and telephone.....	767.54	496.11	271.43	
Postage and freight.....	186.95	342.00		155.05
Incidentals.....	599.65	630.64		30.99
Special service fund.....		1,000.00		1,000.00
Total, governor.....	29,005.57	30,828.37		1,822.80
Executive secretary:				
Salaries.....	32,188.82	31,113.85	1,074.97	
Stationery and printing.....	505.59	653.45		147.86
Furniture.....	185.50	3.92	181.58	
Postage and freight.....	213.82	418.00		204.18
Telegraph and telephone.....	6.82	12.62		5.80
Incidentals.....	698.04	992.34		294.30
Printing and publication of laws.....	88.76	101.66		12.90
Bureau of weights and measures—				
Salaries.....	11,641.86	11,692.05		50.19
Stationery and printing.....	414.73	90.06	324.67	
Traveling expenses.....	3,513.94	4,262.71		748.77
Telegraph and telephone.....	24.91	27.45		2.54
Equipment of weights and measures.....	113.73	154.60		40.87
Postage and freight.....	1,296.55	1,065.81	230.74	
Incidentals.....	248.02	222.93	25.09	
Bureau of supplies, printing, and transportation—				
Salaries.....	25,729.69	26,123.20		393.51
Contingent expenses.....	7,181.95	6,761.44	420.51	
Total, executive secretary ¹	84,052.73	83,696.09	356.64	

¹ Bureau of supplies, printing, and transportation, "Working capital fund" not included as it is self supporting.

EXHIBIT No. 5.—Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27)—Continued.

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Public service commission:				
Salaries and expenses.....	\$7,816.67	(\$7,223.10)	\$593.57	
Incidentals.....	656.05		656.05	
Miscellaneous expenses.....	4,335.70		4,335.70	
Total, public service commission.....	12,808.42	7,223.10	5,585.32	
Attorney general:				
Salaries.....	45,128.10	48,947.02		\$3,818.92
Incidentals.....	1,807.03	2,047.34		240.31
Litigation fund.....	4,103.13	1,703.55	2,399.58	
Postage.....	400.00	396.00	4.00	
Traveling expenses.....	1,945.35	739.21	1,206.14	
Total.....	53,383.61	53,833.12		449.51
Penal institutions—				
Reform school:				
Salaries.....	14,047.56	13,654.49	393.07	
Subsistence.....	12,271.64	9,562.67	2,708.97	
Equipment.....	4,351.16	1,282.68	3,068.48	
Lighting, power, and water.....	1,428.61	1,597.40		168.79
Telegraph and telephone.....	26.77	73.25		46.48
Transportation and care of animals.....	448.73	473.59		24.86
Postage and freight.....	188.03	42.77	145.26	
Incidentals.....	2,145.94	4,298.71		2,152.77
Total.....	34,908.44	30,985.56	3,922.88	
Penitentiary:				
Salaries.....	22,623.56	23,101.56		478.00
Food for prisoners.....	26,370.53	31,410.87		5,040.34
Clothing.....	10,133.34	8,365.98	1,767.36	
Saving fund.....	2,366.31	2,158.60	207.71	
Medicines.....	910.78	745.16	165.62	
Fuel.....	462.95	556.86		93.91
Incidentals.....	3,669.51	3,864.05		194.54
Water.....	953.05	824.17	128.88	
Lighting.....	1,507.67	1,391.36	116.31	
Telegraph and telephone.....	73.43	73.48		— .05
Postage and freight.....	91.65	34.00	57.65	
Total.....	69,162.78	72,526.09		3,363.31
San Juan jail:				
Salaries.....	2,814.83	2,499.83	315.00	
Food for prisoners.....	16,024.20	13,735.23	2,288.97	
Lighting and water.....	821.94	538.02	283.92	
Telegraph and telephone.....	19.52	6.98	12.54	
Postage and freight.....	50.23	4.22	46.01	
Incidentals.....	2,698.56	1,254.36	1,444.20	
Total.....	22,429.28	18,038.64	4,390.64	
Arecibo jail:				
Salaries.....	7,043.66	6,436.87	606.99	
Food for prisoners.....	15,440.29	6,633.95	8,806.34	
Lighting and water.....	1,242.90	687.49	555.41	
Telegraph and telephone.....	191.17	59.31	131.86	
Postage and freight.....	171.62	22.83	148.79	
Incidentals.....	7,367.70	900.59	6,467.11	
Total.....	31,327.34	14,710.84	16,616.50	
Ponce jail:				
Salaries.....	6,620.16	6,935.40		306.24
Food for prisoners.....	18,888.05	6,507.27	12,380.78	
Lighting and water.....	795.57	532.58	262.99	
Telegraph and telephone.....	27.59	3.68	23.91	
Postage and freight.....	117.24	21.07	96.17	
Incidentals.....	7,080.17	432.71	6,647.46	
Total.....	33,546.78	14,432.71	19,114.07	

EXHIBIT No. 5.—Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Attorney general—Continued.				
Penal institutions—Continued.				
Mayaguez jail:				
Salaries.....	\$5,984.67	\$6,364.00		\$379.33
Food for prisoners.....	2,642.88	4,208.84		1,566.46
Lighting and water.....	201.40	500.35		298.95
Telegraph and telephone.....	21.98	8.42	\$13.56	
Postage and freight.....	171.52	28.79	142.73	
Incidentals.....	3,017.16	487.67	2,529.49	
Total.....	12,039.11	11,592.07	447.04	
Humacao jail:				
Salaries.....	5,987.98	6,133.19		145.21
Food for prisoners.....	6,280.74	9,168.30		2,887.56
Lighting and water.....	776.57	728.95	47.62	
Telegraph and telephone.....	60.77	67.15		6.38
Postage and freight.....	47.93	31.64	16.29	
Incidentals.....	910.18	653.12	257.06	
Total.....	14,064.17	16,782.26		2,718.19
Guayama jail:				
Salaries.....	4,962.33	5,233.84		251.51
Food for prisoners.....	4,804.29	6,382.65		1,578.36
Lighting and water.....	467.23	356.63	100.70	
Telegraph and telephone.....	58.45	58.64		— .19
Postage and freight.....	33.43	22.31	11.12	
Incidentals.....	708.11	681.38	26.73	
Total.....	11,043.84	12,735.35		1,691.51
Aguadilla jail:				
Salaries.....	4,540.26	4,725.51		185.25
Food for prisoners.....	2,638.08	4,056.77		1,418.69
Rent.....	437.00	720.00		283.00
Lighting and water.....	62.87	190.74		127.87
Telegraph and telephone.....	10.08	6.06	4.02	
Postage and freight.....	42.76	24.50	18.26	
Incidentals.....	688.64	682.22	6.42	
Total.....	8,419.69	10,405.80		1,986.11
Miscellaneous:				
Women's and children's ward, salaries.....		1,440.00		1,440.00
Transportation of prisoners.....	1,435.03	746.81	688.22	
Maintenance of prisoners in municipal jails.....	8,883.34	12,081.33		3,197.99
Reimbursement to Ramon Labiosa for house rent.....	130.00		130.00	
Total.....	10,448.37	14,268.14		3,819.77
Total, penal institutions.....	247,389.80	216,467.66	30,922.24	
Total, attorney general.....	300,773.41	270,310.68	30,462.73	
Treasurer:				
Salaries.....	1212,282.04	194,114.05	18,167.99	
Stationery and printing.....	6,978.05	7,421.93		443.88
Lighting and water.....	98.78	83.30	10.48	
Telegraph and telephone.....	1,353.38	943.85	409.53	
Incidentals.....	7,868.32	6,979.74	878.58	
Postage and freight.....	5,814.96	5,669.56	145.40	
Automobile repairs.....		147.11		147.11
New engraving plates and printing internal-revenue stamps.....	7,967.93	8,810.04		852.11
Cigar guarantee stamps.....		19.61		19.61
Revision of the assessment of property in Porto Rico.....		6,677.76		6,677.76
Settlement of claims for overcollection of rentals.....		45.17		45.17
Traveling expenses.....	947.18		947.18	
Traveling expenses, internal revenue agents.....	9,311.80	6,855.53	2,456.27	

1 This amount includes \$71,574.40 for "Salaries collectors of internal revenues" and \$771.59 for "Compensation to stamp agents."

EXHIBIT No. 5.—*Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.*

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Treasurer—Continued.				
Care of horses, internal revenue agents.....	\$5,838.30	\$5,310.75	\$527.55	.....
Traveling expenses, assessors.....	3,944.78	2,844.31	1,100.47	.....
Care of horses, assessors.....	2,237.00	1,906.50	330.50	.....
Levying additional taxes on income of the fiscal year 1917-18.....	4,933.85	.....	4,933.85	.....
Inspection of Porto Rican tobacco.....	1,184.17	2,931.38	.....	\$1,747.21
Premiums of bonds of employees of the insular government.....	4,958.39	.....	4,958.39	.....
Reimbursements to municipalities for influenza expenditures.....	22,187.03	.....	22,187.03	.....
Total, treasurer.....	297,885.96	250,765.59	47,120.37	.....
Auditor:				
Salaries.....	75,724.59	67,002.84	8,721.75	.....
Stationery and printing.....	1,484.36	1,230.62	253.74	.....
Telegraph and telephone.....	52.12	56.23	.....	4.11
Traveling expenses.....	4,533.56	4,086.35	447.21	.....
Postage and freight.....	461.41	401.24	60.17	.....
Incidentals.....	966.38	1,986.84	.....	966.46
Total, auditor.....	83,252.42	74,763.12	8,489.30	.....
Department of the Interior:				
Office of the commissioner—				
Salaries.....	92,692.02	87,196.54	5,495.48	.....
Incidentals.....	10,786.01	12,542.15	.....	1,756.14
Traveling expenses.....	1,585.84	2,152.95	.....	567.11
Postage and freight.....	2,948.86	2,316.14	.....	267.28
Blank books and printing.....	2,778.98	2,026.63	752.35	.....
Automobile expenses.....	1,720.93	1,201.78	519.15	.....
Expenses, division of public lands.....	.....	1,932.86	.....	1,932.86
Telegraph and telephone.....	179.23	156.41	22.82	.....
Purchase of automobile plates.....	2,473.92	.....	2,473.92	.....
Total.....	114,265.79	109,535.46	4,740.33	.....
Maintenance and repairs of public roads and bridges: Construction, maintenance, and repair of public roads and bridges....	615,397.89	578,463.62	36,929.27	.....
Maintenance, repairs, and reconstruction of public buildings—				
Maintenance, repairs, and reconstruction of public buildings.....	60,010.16	49,461.60	10,548.56	.....
Water for public buildings.....	1,030.94	862.15	168.79	.....
Electric light for public buildings.....	2,893.23	2,705.39	187.84	.....
Repairs to Institute of Tropical Medicine buildings.....	.....	915.75	.....	915.75
Construction of two dormitories, boys' and girls' charity school.....	26,415.00	599.00	25,816.00	.....
Maintenance, repair, construction of buildings, and improvements of public lands, College of Agriculture and Mechanical Arts, Mayaguez.....	4,461.57	.....	4,461.57	.....
Alteration, repair, and construction of reform school building.....	7,283.53	22,705.29	.....	15,421.76
Repairs, reform school buildings.....	.....	979.68	.....	979.68
Reconstruction of Fajardo custom-house.....	.....	514.56	.....	514.56
Total.....	102,094.43	78,743.42	23,351.01	.....
Maintenance and repair of harbor improvements: Repairing bulkhead and sea wall in San Juan harbor.....	712.73	2,979.15	.....	2,266.42
Miscellaneous—				
Maintenance of artesian well, Quebradillas.....	.....	31.74	.....	31.74
Maintenance of aqueducts at Quebradillas and Isabela.....	.....	1,943.53	.....	1,943.53
Plans for construction of public-service railroads.....	761.41	571.46	189.95	.....

¹ This amount includes \$1,068.79 for "Compensation to pilots acting as captains of ports."

EXHIBIT No. 5.—*Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.*

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Department of the Interior—Continued.				
Miscellaneous—Continued.				
Survey, sale, or lease of certain government lands at Boqueron, Cabo Rojo	\$78.47	\$17.44	\$61.03	
Survey and sale of certain government lands.....	287.96	271.40	16.56	
Study of irrigation at Lajas and Isabela.....		13,981.49		\$13,981.49
Study of irrigation of the districts of Ponce and Juana Diaz.....		5,323.70		5,323.70
Promote the cultivation of new crops and for forest reserves.....	2,086.10		2,086.10	
Earthquake relief fund—				
Repair and partial reconstruction of the building, Arecibo district court.....	1,294.37		1,294.37	
Repairs to the Ponce district court building.....	950.08		950.08	
Repairs to the building of the blind asylum at Ponce.....	687.76		687.76	
Repairs to the building for the office of the captain of the port in Ponce.....	743.42		743.42	
Repairs to the building for the girls' charity school in Santurce.....	3,708.57		3,708.57	
Repairs to the building for the boys' charity school, Santurce.....	4,494.06		4,494.06	
Aiding poor persons who by reason of the earthquake have lost either partially or totally their homes.....	440.89		440.89	
School board of Añasco, for repairs of the Ramirez de Arellano and De Hostos school buildings, at \$2,000 each.....	265.48		265.48	
School board of Lares, for the repair of the Clay School building.....	25.09		25.09	
Repairs to the reform school building.....	1,187.11		1,187.11	
Repair of Caminero houses, at not to exceed \$300 each.....	773.21		773.21	
Repairing bridges and culverts.....	416.11		416.11	
Aiding the municipality of Aguada in the reconstruction and repair of municipal buildings.....	— .13		— .13	
School board of Aguadilla, for repair of Lafayette School building.....	497.12		497.12	
School board of Moca, for the repair of M. Quifonez School building.....	21.28		21.28	
School board of San German, for the repair and reconstruction of Antonia Martinez School building.....	41.34		41.34	
School board of San Sebastian, for the repair and reconstruction of Whittier School building.....	23.90		22.90	
School board of Sabana Grande, for the repair and reconstruction of Cooper School building.....	25.00		25.00	
Changing course of Yaural River at Arroyo.....		825.37		825.37
Total.....	13,807.86	22,966.13		4,158.27
Total, department of the interior.....	861,278.70	792,632.78	58,586.92	
Bureau of insular telegraph:				
Salaries ¹	76,956.39	68,496.28	8,470.11	
Incidentals.....	21,235.15	23,143.38		1,908.23
Repayment to Porto Rico Telephone Co. of 25 per cent on telegraph business.....	901.52	892.09	9.43	
Extension of telegraph or telephone line to Guaynabo.....		350.65		350.65

¹ This amount includes \$2,985.90 for "Compensation for extra work during earthquake and influenza periods" and \$2,621.92 for "Salaries additional employees during epidemic."

EXHIBIT No. 5.—*Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.*

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Bureau of insular telegraph—Continued.				
Rent for new quarters where free quarters were destroyed.....	\$71.13	.....	\$71.13	.....
Construction of frame building, Aguadilla.....	— 52	.....	— 52	.....
Total, bureau of insular telegraph.....	99,164.70	\$92,872.40	6,292.30	.....
Department of education:				
Office of the commissioner—				
Salaries.....	41,602.79	40,672.12	930.67	.....
Incidentals and traveling expenses.....	9,628.65	8,448.13	1,180.52	.....
Postage.....	1,292.13	1,500.00	.....	\$207.87
Total.....	52,523.57	50,620.25	1,903.32	.....
Public schools—				
Salaries, common schools.....	1,377,408.98	1,156,464.33	220,944.65	.....
Contingent expenses, common schools.....	6,483.23	6,783.01	.....	299.79
Textbooks and school supplies.....	30,664.59	19,578.43	11,086.16	.....
Common school equipment.....	113,389.63	17,974.99	.....	.....
Salaries, high schools.....	91,117.76	83,880.67	7,237.09	.....
Contingent expenses, high schools.....	4,782.01	5,530.11	.....	778.10
Summer school and institutes.....	1,946.30	2,980.36	.....	1,034.06
Night schools.....	4,618.00	.....	4,618.00	.....
Rent, equipment, and supplies for rural schools.....	1,976.27	1,308.58	667.69	.....
Total.....	1,506,577.45	1,268,500.50	238,076.95	.....
Miscellaneous—				
Instruction and training of young men from Porto Rico in the United States.....	.....	500.00	.....	500.00
Magazine publishing fund.....	115.17	1,849.70	.....	1,734.53
Total.....	115.17	2,349.70	.....	2,234.53
Total, department of education.....	1,558,216.19	1,331,470.45	226,745.74	.....
University of Porto Rico:				
Expenses, University of Porto Rico.....	49,762.83	49,499.99	262.84	.....
Construction and improvements.....	.....	142.32	.....	142.32
Total, University of Porto Rico.....	49,762.83	49,642.31	120.52	.....
Carnegie Library:				
Salaries.....	5,786.66	6,967.75	.....	1,181.09
Incidentals.....	3,320.82	1,414.40	1,906.42	.....
Total, Carnegie Library.....	9,107.48	8,382.15	725.33	.....
Government of the Island of Culebra:				
Salaries.....	4,002.00	2,992.49	1,009.51	.....
Contingent expenses.....	.....	712.00	.....	712.00
Rent.....	60.00	.....	60.00	.....
Lighting.....	420.00	.....	420.00	.....
Street cleaning.....	300.00	.....	300.00	.....
Office supplies and medicines.....	67.81	.....	67.81	.....
Total, government of the Island of Culebra.....	4,849.81	3,704.49	1,145.32	.....
Department of agriculture and labor:				
Office of the commissioner—				
Salaries.....	15,023.34	14,911.94	111.40	.....
Traveling expenses.....	171.85	19.20	152.65	.....
Lighting and water.....	58.20	9.01	49.19	.....
Stationery and printing.....	297.86	121.78	176.08	.....
Postage and freight.....	87.97	30.00	57.97	.....
Telegraph and telephone.....	45.14	47.61	.....	2.47
Incidentals.....	165.00	228.59	.....	63.59
Total.....	15,849.36	15,368.13	481.23	.....

¹ Credit balance.

EXHIBIT No. 5.—*Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)*—Continued.

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Department of agriculture and labor—Contd.				
Bureau of agriculture—				
Salaries.....	\$15,447.29	\$6,721.39	\$8,725.90	
Traveling expenses.....	3,138.70	434.03	2,704.67	
Printing and stationery.....	751.86	117.35	634.51	
Telegraph and telephone.....	113.09	103.51	9.58	
Exhibition supplies.....		73.16		\$73.16
Incidentals.....	371.90	437.53		65.63
Lighting and water.....	48.78	19.68	29.08	
Postage and freight.....	275.79	40.34	235.45	
Total.....	20,147.39	7,946.99	12,200.40	
Bureau of labor—				
Salaries.....	12,503.90	11,661.86	842.04	
Stationery and printing.....	502.42	377.20	125.22	
Telegraph and telephone.....	75.30	118.83		43.53
Traveling expenses.....	2,503.71	3,744.67		1,240.96
Postage and freight.....	291.70	15.00	276.70	
Incidentals.....	225.61	247.94		22.33
Total.....	16,102.64	16,165.50		22.86
Experimental station and field force—				
Salaries.....	21,250.73	16,622.30	4,628.43	
Farm labor.....	4,497.01	5,518.34		1,021.33
Traveling expenses.....	2,458.80	1,376.00	1,082.80	
Printing and stationery.....	816.72	1,334.96		518.24
Incidentals.....	1,149.66	194.64	955.02	
Supplies.....	1,962.66	1,617.95	344.71	
Postage and freight.....	435.22	262.59	172.63	
Telegraph and telephone.....	174.60	124.98	49.62	
Lighting and water.....	101.85	41.56	60.29	
Motorcycle supplies.....		96.60		96.60
Maintenance of buildings.....	60.96	1,195.95		1,134.99
Total.....	32,908.21	28,385.87	4,522.34	
Miscellaneous—				
Expenses, board of agriculture.....		135.78		135.78
Board of commissioners of agriculture.....		136.57		136.57
Promoting the development of commerce and agriculture of Porto Rico.....		227.02		227.02
Insular forest fund.....	2,214.41		2,214.41	
Total.....	2,214.41	4.81	2,209.60	
Total, department of agriculture and labor.....	87,222.01	67,871.30	19,350.71	
Insular police:				
Salaries.....	426,791.70	393,866.57	33,225.13	
Stationery and printing.....	3,635.67	4,301.39		665.72
Lighting and water.....	3,918.03	3,606.30	312.73	
Telegraph and telephone.....	2,998.76	3,375.46		376.70
Rent of quarters.....	14,581.80	13,285.52	1,296.28	
Transportation.....	8,007.96	6,453.41	1,554.55	
Automobile supplies and repairs.....	5,970.05	2,673.73	3,296.32	
Unexpended property.....		165.30		165.30
Care of animals.....	6,262.46	6,327.76		65.30
Postage and freight.....	1,416.91	1,364.67	52.24	
Secret and confidential services.....	1,500.00	947.67	552.33	
Incidentals.....	4,192.11	3,640.01	552.10	
Special guardsmen for elections.....		7,192.67		7,192.67
Pay for reenlistments.....	7,041.44	3,099.70	3,941.74	
Bicycle repairs and supplies.....	359.26		359.26	
Compensation for the lives of members of the insular police.....	2,000.00	1,000.00	1,000.00	
Total, insular police.....	488,676.15	450,768.56	37,907.59	

¹ Credit balance.

EXHIBIT No. 5.—*Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.*

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Department of health:				
Office of the commissioner—				
Salaries.....	\$75,210.26	\$70,418.71	\$4,791.55	
Automobile supplies and repairs.....		632.15		\$632.15
Chemicals and disinfectants.....	60.91	157.67		96.76
Lighting and water.....	572.57	504.23	68.34	
Postage and freight.....	2,789.62	1,428.04	1,366.58	
Purchase of vaccine virus and serums.....	355.75	158.16	197.59	
Stationery, printing, and publication of medical bulletin.....	3,644.16	2,104.80	1,539.36	
Supplies and equipment, bacteriological laboratory.....	1,331.04	1,392.63		61.59
Supplies and equipment, chemical laboratory.....	2,194.62	1,006.15	1,188.47	
Telegraph and telephone.....	849.14	695.21	153.93	
Traveling expenses.....	15,588.68	6,417.53	9,171.15	
Incidentals.....	1,436.67	2,090.99		654.32
Labor.....	3,456.80	3,104.35	352.45	
Purchase of automobile.....		3,180.65		3,180.65
Rent.....	7,113.28		7,113.28	
Killing and burying animals.....	7.50		7.50	
Total.....	114,611.00	93,286.27	21,324.73	
Leper colony—				
Salaries.....	5,101.33	4,234.00	867.33	
Subsistence.....	6,016.53	7,206.97		1,189.44
Clothing and bedding.....	1,099.11	3,167.64		2,068.53
Incidentals.....	2,671.65	2,174.67	496.98	
Unexpendable property.....	4.00		4.00	
Total.....	14,892.62	16,782.28		1,889.66
Quarantine hospital—				
Salaries.....	1,806.35	1,796.31	10.04	
Subsistence.....	620.48	616.31	4.17	
Lighting and water.....	280.58	267.60	12.98	
Incidentals.....	322.02	461.17		139.15
Building construction and repairs.....	4,785.43	1,592.22	3,193.21	
Total.....	7,814.86	4,733.61	3,081.25	
Field force—				
Salaries.....	84,162.39	77,155.40	7,006.99	
Killing and burying animals.....		6.62		6.62
Lighting and water.....		218.29		218.29
Postage and freight.....		298.76		298.76
Rent.....		1,461.81		1,461.81
Telegraph and telephone.....		90.12		90.12
Traveling expenses.....		1,777.17		1,777.17
Incidentals.....		6,446.04		6,446.04
Total.....	84,162.39	87,454.21		3,291.82
Suppression of anemia.....	15,500.03	8,347.56	7,212.47	
Mosquito extermination—				
Salaries.....		6,756.10		6,756.10
Traveling expenses.....		80.45		80.45
Incidentals.....		9,097.88		9,097.88
Mosquito extermination and control and suppression of malaria.....	21,261.91	7,672.72	13,589.19	
Total.....	21,261.91	23,607.15		2,345.24
Blind asylum—				
Salaries.....	9,954.67	9,134.00	820.67	
Subsistence.....	6,070.70	7,630.84		1,560.14
Clothing and bedding.....	285.67	906.74		621.07
Medicines and supplies.....	324.51	639.52		315.01
Fuel.....	587.50	746.90		159.40
Incidentals.....	1,370.47	1,069.29	301.18	
Water and lighting.....	144.73	322.27		177.54
Transportation of patients.....	253.35	672.00		318.65
Total.....	18,991.60	21,021.56		2,029.96

EXHIBIT No. 5.—Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Leprosy colony—Continued.				
Insane asylum—				
Salaries.....	\$27,061.08	\$23,293.17	\$3,767.91	
Subsistence.....	32,049.47	34,921.63		\$2,872.16
Fuel.....	1,610.81	1,596.29	12.52	
Incidentals.....	2,263.95	2,453.46		189.51
Water and lighting.....	1,685.61	2,043.58		357.97
Medicines and supplies.....	2,123.47	1,372.13	751.34	
Transportation of patients.....	670.38	613.96	56.42	
Clothing and bedding.....	13,070.73	12,594.14	476.59	
Total.....	64,394.04	63,702.08	691.96	
Girls' charity school:				
Salaries.....	16,420.50	12,996.66	3,423.84	
Subsistence.....	13,449.01	12,843.38	605.63	
Contingent expenses.....	10,767.97	6,110.44	4,657.53	
Total.....	40,637.48	31,950.48	8,687.00	
Boys' charity school:				
Salaries.....	26,907.53	20,475.65	6,431.88	
Subsistence.....	20,472.08	17,503.21	2,968.87	
Contingent expenses.....	14,171.77	9,451.57	4,720.20	
Total.....	61,551.38	47,430.43	14,120.95	
Miscellaneous:				
Emergency fund for control and suppression of epidemics.....	30,280.05	5,664.33	24,615.72	
Rat extermination.....	827.13	767.52	59.61	
Suppression of measles.....		11,653.45		11,653.45
Care of tuberculosis patients.....	39,999.20	21,286.95	18,712.25	
Education of deaf and dumb children.....	1,200.00	1,200.00		
Suppression of influenza.....	257,178.20		257,178.20	
Total.....	329,484.58	40,572.25	288,912.33	
Total, department of health.....	773,361.89	438,887.88	334,474.01	
Civil service commission:				
Salaries.....	5,741.17	6,305.37		564.20
Incidentals.....	47.82	604.02		556.20
Stationery, printing, and additional personnel.....	550.51		550.51	
Telegraph and telephone.....	13.50		13.50	
Postage and freight.....	106.48		106.48	
Total, civil service commission.....	6,459.48	6,909.39		449.91
Institute of Tropical Medicine and Hygiene of Porto Rico:				
Salaries.....	9,898.33	10,023.00		124.67
Stationery and printing.....	110.17	99.24	10.93	
Lighting, gas, and water.....	417.25	238.75	178.50	
Telegraph and telephone.....	79.07	74.85	4.22	
Travelling expenses.....		6.00		6.00
Care of experimental animals.....	156.87	301.84		144.97
Postage and freight.....	147.29	96.96	50.33	
Incidentals.....	159.12	168.23		9.11
Purchase of experimental animals.....	29.50	11.16	18.34	
Instruments, reagents, apparatus.....	869.39	834.07	35.32	
Unrependable property.....	18.34		18.34	
Library.....	141.00	15.30	125.70	
Culture, media, and ice.....	166.05	221.38		55.33
Medicines.....	17.18	41.83		24.65
Miscellaneous expenses.....	1,151.83	1,174.80		22.97
Total, Institute of Tropical Medicine and Hygiene of Porto Rico.....	13,361.39	13,307.41	53.98	
General miscellaneous:				
Miscellaneous expenditures, subject to the approval of the governor.....	12,484.40	4,554.56	7,929.84	
Salary of historian.....	1,500.00	1,500.00		
Scholarship for José Colón Román.....		550.00		550.00
Scholarship for Ricardo Hernández Romero.....		550.00		550.00
Scholarship for Jesús María Sanromá.....		600.00		600.00

¹ Credit balance.

EXHIBIT No. 5.—Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
General Miscellaneous—Continued.				
Expenses of commission to investigate appropriations and expenditures of the insular government.....		\$176.67		\$176.67
Refunding bond expense.....		2.06		2.06
Irrigation investigating commission.....		283.60		283.60
Expenses of elections in Porto Rico.....	\$364.06	25,065.28		24,701.20
Expenses, sale of bonds for roads.....		1,775.99		1,775.99
National Guard of Porto Rico fund.....	3,519.53	2,432.99	\$1,086.54	
Repairs to school buildings in Naranjito.....		675.67		657.67
Relief of Fernando Montilla.....		900.00		900.00
Premium upon bonds of employees of the insular government.....		4,715.31		4,715.31
Relief of Pedro Homar.....		500.00		500.00
Board of medical examiners.....	789.71	849.84		60.13
Board of dental examiners.....	273.44	407.66		134.22
Board of pharmaceutical examiners.....	1,341.58	1,066.71	244.87	
Translation bureau—				
Salaries and expenses.....	10,430.00	11,027.02		597.02
Temporary employees.....	3,561.90		3,561.90	
Incidentals.....	426.99		426.99	
Board of commissioners for the promotion of legislation in the States and Territories of the Union.....	123.60		123.60	
Entertainment fund for Members of Congress of the United States, guests of the legislature of Porto Rico.....	24,747.20		24,747.20	
Repayment of loans made to the insular government during emergency due to earthquake of October, 1918—				
Banco Comercial.....	19,286.65		19,286.65	
Royal Bank of Canada.....	11,998.04		11,998.04	
American Colonial Bank.....	8,838.45		8,838.45	
Banco Territorial y Agrícola.....	4,999.63		4,999.63	
Expenses of the banquet tendered the French Navy by the legislature.....	900.00		900.00	
Total, general miscellaneous.....	106,585.20	55,093.38	50,491.82	
Total executive.....	4,854,824.34	4,019,179.45	835,644.89	
JUDICIAL.				
Insular courts:				
Supreme courts—				
Salaries.....	51,195.80	51,030.43	165.37	
Incidentals.....	1,001.10	943.13	57.97	
Purchase of law books.....	2.50		2.50	
Water.....	31.45	19.84	11.61	
Lighting.....	73.74	71.04	2.70	
Total.....	52,304.59	52,064.44	240.15	
Publication of the decisions of the supreme court—				
Salaries.....	6,118.33	5,507.50	610.83	
Incidentals.....	106.58	7.06	99.52	
Advance sheets.....	498.09	749.09		251.00
Publication of the decisions of the supreme court.....	12.00	20.60		8.60
Digest of the "Decisiones de Puerto Rico".....	8.18		8.18	
Total.....	6,742.18	6,284.25	457.93	
District courts—				
Salaries.....	124,396.72	121,333.42	3,063.30	
Postage.....	724.59	745.00		20.41
Incidentals.....	4,694.53	4,116.58	577.95	
Water.....	104.79	182.44		77.65
Lighting.....	277.18	210.62	66.56	
Rent.....	2,821.38	1,622.50	1,198.88	
Traveling expenses, judges and fiscals.....	1,705.84	1,673.94	32.00	
Care of horses.....	1,372.84	1,377.50		4.66
Traveling expenses, marshals.....	81.10	82.22		51.12
Autopsies and exhumations.....	669.00	996.00		277.00
Fees of jurors.....	7,465.44	12,176.78		4,711.34
Fees of witnesses in cases of lunacy.....	1,221.00	1,845.00		624.00

¹ Credit balance.

EXHIBIT No. 5.—Comparative statement of accrued expenses payable from insular revenue appropriations for the years ending June 30, 1919, and June 30, 1918. (Not to be confused with cash disbursements on Exhibit No. 27.)—Continued.

Description.	Year ending June 30—		Increase.	Decrease.
	1919	1918		
Insular courts—Continued.				
District courts—Continued.				
Fees of witnesses.....	\$10,262.68	\$17,689.12		\$7,326.44
Fees of defense witnesses in criminal cases.....	20.40		\$20.40	
Total.....	155,857.49	163,491.02		7,633.53
Municipal courts—				
Salaries.....	99,877.57	99,770.17	107.40	
Incidentals.....	3,508.74	3,581.78		73.04
Rent.....	7,263.03	6,563.20	699.83	
Traveling expenses, court officials.....	3,558.97	3,785.09		226.12
Care of horses.....	3,345.60	3,321.54	24.06	
Traveling expenses, marshals.....	1,622.32	1,762.84		140.52
Fees of witnesses.....	1,679.82	2,160.20		480.36
Total.....	120,856.05	120,944.82		88.77
Total, insular courts.....	335,760.31	342,784.53		7,024.22
Registrars of property:				
Salaries.....	51,566.01	52,955.27		1,389.26
Incidentals.....	2,329.46	2,028.06	301.40	
Rent.....	3,161.03	3,140.00	21.03	
Clerk at large for registries of property.....	600.00		600.00	
Total, registrars of property.....	57,656.50	58,123.33		466.83
Total judicial.....	393,416.81	400,907.86		7,491.05

RECAPITULATION.

Legislative.....	\$63,466.81	\$88,299.81		\$4,833.00
Executive.....	4,854,824.34	4,019,179.45	\$835,644.89	
Judicial.....	393,416.81	400,907.86		7,491.05
Total.....	5,331,707.96	4,508,387.12	823,320.84	

EXHIBIT No. 6.—Loans to municipalities as of June 30, 1919.¹

Municipality.	Balance July 1, 1918.	Loans made during year.	Amount repaid during year.	Total amount of loans June 30, 1919.	
				Converted into bond issues pending execution. ²	Loans not convertible into bond issues.
Aguadilla.....	\$7,000.00		\$750.00		\$6,250.00
Aguares Buenas.....	1,978.20		300.00		1,678.20
Albionito.....	2,400.00				2,400.00
Alfonito.....	16,500.00		16,500.00		
Anasco.....	1,000.00		1,000.00		
Coroal.....	4,500.00		300.00		4,200.00
Fajardo.....	4,400.00	\$6,000.00	1,400.00		9,000.00
Guayama.....	5,500.00		1,500.00		4,000.00
Guayanilla.....	1,000.00		500.00		500.00
Guabo.....	1,685.00		565.00		1,120.00
Isabela.....	3,000.00		500.00		2,500.00
Maricao.....	7,000.00			\$7,000.00	
Mamabo.....	9,500.00	1,500.00		11,000.00	
Mayaguez.....	9,584.48	570.00	1,450.84		8,703.64
Naranjito.....	900.00		200.00		700.00
Pedraza.....		2,966.61	560.86		2,405.75

¹ These loans are repayable to the indefinite no-fiscal year appropriation "Relief of municipalities," as shown in Exhibit No. 32.

² For details and explanation of these bond issues see Exhibit No. 9.

EXHIBIT No. 6.—*Loans to municipalities as of June 30, 1919—Continued.*

Municipality.	Balance July 1, 1918.	Loans made dur- ing year.	Amount repaid dur- ing year.	Total amount of loans June 30, 1919.	
				Converted into bond issues pend- ing execu- tion.	Loans not converti- ble into bond issues.
Penuelas.....	\$600.00		\$100.00		\$500.00
Ponce.....	42,500.00	\$10,000.00		\$52,500.00	
Quebradillas.....	850.00		170.00		680.00
Salinas.....	4,500.00		1,500.00		3,000.00
San Juan.....	5,000.00		5,000.00		
San Lorenzo.....	700.00				700.00
Toa Alta.....	1,200.00		150.00		1,050.00
Utua.....	6,991.85	8,960.00		15,951.85	
Total.....	138,299.53	29,996.61	32,446.50	86,451.85	49,397.79
Total amount of both classes.....				135,849.64	
Less reserve for municipal loan account.....				1,000.00	
				134,849.64	

EXHIBIT No. 7.—*Loans to school boards as of June 30, 1919.¹*

School board.	Balance July 1, 1918.	Loans made dur- ing year.	Amount repaid dur- ing year.	Total amount of loans June 30, 1919.	
				Converted into bond issue pend- ing execu- tion.	Loans not converted into bond issues.
Cayey.....	\$25,000.00	\$5,000.00	\$30,000.00		
Manati.....	600.00		600.00		
Naranjito.....	933.32		133.33		\$799.99
Total.....	26,533.32	5,000.00	30,733.33		799.99

¹ These loans are repayable to the indefinite no-fiscal year appropriation "Relief of school boards."EXHIBIT No. 8.—*Loans from school building fund, amounts due from school boards for construction of school buildings under acts of the legislative assembly approved Mar. 14, 1907, and Mar. 9, 1908.*

School board.	Due Gov- ernment July 1, 1918.	Total cost of improve- ments during year.	Proportion assumed by insular gov- ernment and charged to construction of school buildings.	Remainder chargeable to school boards.	Repaid on loans during year.	Balance due Government June 30, 1919.
Aguada.....	\$990.00				\$330.00	\$660.00
Aguadilla.....	4,500.00				900.00	3,600.00
Agua Buenas.....	100.02				100.02	
Alfonito.....	3,399.99				600.00	2,799.99
Anasco.....	450.00				450.00	
Ciales.....	1,235.98				450.00	785.98
Cidra.....	225.00				225.00	
Comerio.....	2,439.61				500.00	2,039.61
Corozal.....	800.00	\$307.62	\$153.81	\$153.81	400.00	400.00
Guayanilla.....	297.97				297.97	
Gurabo.....	3,299.55	14,340.54	7,170.26	7,170.26	1,150.00	9,319.53
Luquillo.....		6,899.24	3,449.56	3,449.56	949.02	2,503.66
Maunabo.....	315.00				315.00	
Moca.....	70.00				70.00	
Rincon.....	2,757.03				400.00	2,357.03
San Lorenzo.....	2,250.00				450.00	1,800.00
Trujillo Alto.....	775.00				225.00	550.00
Vega Alta.....	1,350.00				450.00	900.00
Total.....	25,255.15	21,547.40	10,773.63	10,773.77	8,259.01	27,799.91

EXHIBIT NO. 9 (PART I).—Municipal bonds pending execution and delivery to treasurer of Porto Rico, June 30, 1919, and their redemption funds.

Municipality.	Authorization and description.	Date of—		Bond issue authorized.	Converted loans from Exhibit No. 6 on June 30, 1919.	Redemption funds, cash balances June 30, 1919.	
		Issue.	Maturity.			Insular revenues.	Trust fund.
Maricao.....	Sept. 6, 1913, series of \$1,000, redeemable yearly beginning July 1, 1914.	July 1, 1913	July 1, 1924	\$11,000.00	\$7,000.00	\$1,000.00	\$5,000.00
Maunabo.....	July 22, 1915, series of \$1,000, redeemable yearly beginning July 1, 1916.	July 1, 1915	July 1, 1927	12,000.00	11,000.00	.....	4,985.80
Ponce.....	June 9, 1917, series of \$16,000, redeemable July 1, 1918; series of \$14,000, redeemable July 1, 1919; series of \$10,000, redeemable yearly July 1, 1920-28.	July 1, 1916	July 1, 1928	120,000.00	52,500.00	.....	20,000.00
Utusado.....	May 4, 1917, series of \$2,000, redeemable yearly beginning July 1, 1918.	.....do.....	July 1, 1925	16,000.00	15,951.85	.....	4,000.00
	Total.....	.....	.....	159,000.00	86,451.85	1,000.00	43,985.80

¹ Although these bonds have not been executed under act 4, approved Feb. 19, 1913, they were treated as actual bond issues in all respects, and the ordinary loans brought from Exhibit No. 6 were treated as converted into bond issues from the date of the bonds.

REPORT OF THE GOVERNOR OF PORTO RICO.

EXHIBIT No. 9 (PART II).—Municipal and school board bonds executed and delivered to treasurer of Porto Rico on June 30, 1919, and their redemption funds.¹

Municipality.	Authorization and description.	Date of—		Par value of bonds issued.	Bonds outstanding on June 30, 1919.				Redemption fund, cash balances June 30, 1919.	Cash in the hands of the treasurer for redemption of series maturing July 1, 1919.	
		Issue.	Maturity.		Owned by The People of Porto Rico.			Held by University of Porto Rico.			Total.
					To secure insular refunding bonds.	To secure loans from Mechanics & Metals National Bank.	Unpledged.				
Aguadilla.....	Jan. 13, 1915, series of \$5,000, redeemable yearly beginning July 4, 1917.	July 1, 1914	July 1, 1936	\$100,000	\$90,000			\$90,000		\$5,000.00	
Alibonito.....	Sept. 2, 1915, series of \$1,500, redeemable yearly beginning July 1, 1916.	July 1, 1915	July 1, 1926	16,500		\$7,500	\$9,000		16,500	5,500.00	
Arroyo.....	Sept. 6, 1913, series of \$1,000, redeemable yearly beginning July 1, 1915.	July 1, 1913	July 1, 1938	24,000	16,000	4,000			20,000	1,000.00	
Barceloneta.....	Feb. 14, 1914, series of \$500, redeemable yearly beginning July 1, 1914.	Jan. 1, 1914	July 1, 1923	5,000		2,500			2,500	500.00	
Barranquitas.....	July 22, 1915, series of \$500, redeemable yearly beginning July 1, 1916.	July 1, 1915	July 1, 1933	9,000		7,500			7,500	500.00	
Bayamon.....	July 22, 1915, series of \$2,000, redeemable yearly beginning July 1, 1916.	July 1, 1915	July 1, 1928	16,000		10,000			10,000	2,000.00	
Caguas.....	Oct. 24, 1913, series of \$5,000, redeemable yearly beginning July 1, 1914.	July 1, 1913	July 1, 1933	100,000	75,000				75,000	5,000.00	
Cayey.....	Feb. 14, 1914, 3 series at \$2,000, redeemable July 1, 1914, 1915, and 1916, and series of \$2,500, redeemable yearly beginning July 1, 1917.	July 1, 1913	July 1, 1932	46,000	25,000	10,000			35,000	2,500.00	
Ciales.....	Mar. 29, 1915, series of \$1,500, redeemable yearly beginning July 1, 1915.	July 1, 1914	July 1, 1933	28,500	22,500				22,500	1,500.00	
Coamo.....	Sept. 16, 1913, series of \$1,500, redeemable July 1, 1913, and series of \$2,500, redeemable yearly beginning July 1, 1914.	July 1, 1913	July 1, 1921	21,500		7,500			7,500	2,500.00	
Comerio.....	Jan. 13, 1915, 1 series of \$500, redeemable July 1, 1916; series of \$1,000, each redeemable yearly beginning July 1, 1917.	July 1, 1914	July 1, 1929	13,500	11,000				11,000	1,000.00	
Dorado.....	Sept. 20, 1913, series of \$500, redeemable yearly beginning July 1, 1913.	July 1, 1913	July 1, 1928	8,000		5,000			5,000	500.00	
Fajardo.....	Sept. 27, 1913, series of \$2,000, redeemable July 1, 1914, and series of \$5,000, redeemable yearly beginning July 1, 1915.	July 1, 1913	July 1, 1934	112,000	66,000	22,000			88,000	5,500.00	

Guayama.....	July 22, 1915, series of \$1,500, redeemable yearly beginning July 1, 1915.	July	1, 1916	July	1, 1925	90,000	.....	72,000	4,500	70,500	242.04	4,500.00
Guayanilla.....	Sept. 6, 1913, series of \$1,000, redeemable yearly beginning July 1, 1914-1932, and \$2,000, redeemable July 1, 1933.	July	1, 1913	July	1, 1933	21,000	12,000	4,000	.....	16,000	.....	1,000.00
Gurabo.....	Jan. 21, 1915, series of \$1,000, redeemable yearly beginning July 1, 1917.	July	1, 1914	July	1, 1936	20,000	18,000	.....	.....	18,000	.....	1,000.00
Humacao.....	Feb. 14, 1914, series of \$2,000, redeemable yearly Jan. 1, 1915-1919; series of \$3,000, redeemable yearly beginning Jan. 1, 1920-1927; and series of \$3,000, redeemable yearly beginning Jan. 1, 1928.	Jan.	1, 1914	Jan.	1, 1937	60,000	.....	50,000	.....	50,000	1,250.00	.....
Jayuya.....	Sept. 6, 1913, series of \$500, redeemable yearly beginning July 1, 1913.	July	1, 1913	July	1, 1922	5,000	.....	2,000	.....	2,000	.....	500.00
Juncos.....	May 29, 1913, series of \$2,000, redeemable yearly beginning July 1, 1915.	July	1, 1913	July	1, 1933	38,000	22,000	8,000	.....	30,000	.....	2,000.00
Lares.....	Jan. 28, 1915, series of \$500, redeemable July 1, 1916; series of \$1,500, redeemable July 1, 1917-1918; and series of \$3,000, redeemable yearly beginning July 1, 1919.	July	1, 1914	July	1, 1935	54,500	51,000	.....	.....	51,000	.....	3,000.00
Pedueñas.....	Feb. 14, 1914, series of \$500, redeemable yearly Jan. 1, 1915-1929, and series of \$1,000, redeemable yearly beginning Jan. 1, 1930.	Jan.	1, 1914	Jan.	1, 1935	13,500	.....	1,000	.....	11,000	250.00	.....
Ponce.....	Aug. 15, 1913, series of \$50,000, \$70,000, \$110,000, and \$160,000, redeemable, respectively, July 1, 1923, 1933, 1943, and 1953.	July	1, 1913	July	1, 1933	390,000	390,000	.....	.....	390,000	25,000.00	.....
Rio Piedras.....	June 27, 1914, series of \$2,000, redeemable yearly July 1, 1915-1920, and series of \$1,500, redeemable yearly beginning July 1, 1921.	July	1, 1914	July	1, 1924	18,000	10,000	.....	.....	10,000	.....	2,000.00
Salinas.....	Jan. 21, 1915, series of \$1,000, redeemable July 1, 1915, and series of \$1,500, redeemable July 1, 1916-1930.	July	1, 1914	July	1, 1930	23,500	18,000	.....	.....	18,000	.....	1,500.00
San Lorenzo.....	Sept. 6, 1913, series of \$500, redeemable yearly beginning July 1, 1914.	July	1, 1913	July	1, 1921	4,000	.....	1,500	.....	1,500	.....	500.00
San Sebastian.....	Mar. 29, 1915, series of \$500, redeemable July 1, 1916; series of \$1,000, redeemable yearly July 1, 1917-1919, and series of \$1,500, redeemable yearly beginning July 1, 1920.	July	1, 1914	July	1, 1925	12,500	10,000	.....	.....	10,000	.....	1,000.00
Toa Baja.....	Oct. 3, 1913, series of \$1,000, redeemable yearly beginning July 1, 1914.	July	1, 1913	July	1, 1926	13,000	4,000	4,000	.....	8,000	.....	1,000.00
Vega Alta.....	May 19, 1913, series of \$1,000, redeemable yearly beginning July 1, 1914.	July	1, 1913	July	1, 1923	10,000	1,000	4,000	.....	5,000	.....	1,000.00
Vieques.....	Sept. 30, 1913, series of \$1,000, redeemable yearly beginning July 1, 1914, and series of \$1,500, redeemable yearly beginning July 1, 1915.	July	1, 1913	July	1, 1932	28,000	15,000	6,000	.....	21,000	.....	1,500.00
Yauco.....	Feb. 16, 1914, series of \$5,000, redeemable yearly beginning Jan. 1, 1915.	Jan.	1, 1914	Jan.	1, 1932	90,000	45,000	20,000	.....	65,000	543.78	.....
Total, municipalities.....												.....
						1,391,000	901,500	248,500	13,500	10,000	1,173,500	28,245.68
						.....	.....	.....	.....	.....	.....	53,500.00

These bonds were issued under act 4, approved Feb. 19, 1913, and received by the Insular government in payment of ordinary loans outstanding. In accordance with the terms of the same act the bonds are carried as cash by the treasurer of Porto Rico.

EXHIBIT No. 10. — Road construction in Porto Rico to fiscal year 1918-19.

Road No.	Designation.	Kilo-meters.	Sections.	Completed by Spanish Government.		Completed by United States Military Government.		Completed by the civil government.		Total.			
				Kilo-meters.	Cost.	Kilo-meters.	Cost.	Kilo-meters.	Cost.				
1	San Juan-Ponce Playa. San Antonio Bridge-Martin Pena Bridge.	134.0	San Juan-Ponce Playa.....	134.0	\$1,358,234.33		185,121.00		\$1,830,834.43	134.0	\$1,474,189.76		
			Inabon Bridge.....					20,878.35		20,878.35		20,878.35	
			Cerrillos Bridge.....					14,166.46		14,166.46		14,166.46	
			Portuguese Bridge.....					35,193.53		35,193.53		35,193.53	
			San Antonio Bridge-Martin Pena Bridge.....					19,345.47		19,345.47		19,345.47	
			Catano-Reyes Catholics.....	18.5	108,452.97						108,452.97	18.5	108,452.97
			Change in the road No. 2 for the new location of Reyes Catholics Bridge.....						2.1	8,238.86	2.1	8,238.86	
			Reyes Catholics Bridge.....										
			Vega Alta-Vega Baja.....	2.5	12,000.00								
			Cibeco Bridge.....						5.9	54,500.00	5.9	54,500.00	
2	Rio Piedras-Ponce	263.0	Vega Alta-Vega Baja.....					8.5	20,270.75	8.5	20,270.75		
			Cibeco Bridge.....						5.71		5.71		
			Vega Baja-Manati.....					12.1	43,063.94	12.1	43,063.94		
			Manati-Arecibo.....					27.3	105,779.73	27.3	105,779.73		
			Variante Angostura.....						6,822.04		6,822.04		
			Arecibo Bridges.....						33,663.85		33,663.85		
			New Arecibo Bridges.....										
			Arecibo Canyuy.....					14.0	62,504.75	14.0	62,504.75		
			Canyuy Bridge.....						3,000.00		3,000.00		
			Canyuy-Aguadilla.....		\$10,181.00			42.0	47,249.25	42.0	57,430.25		
			Aguadilla-Aguada.....				3.1	6,997.23	3.1	6,997.23			
			Aguada-Anasco.....				23.5	190,506.85	23.5	190,506.85			
			Mayaguez-Anasco.....	9.0	No records.		2.9	7,403.96	11.9	7,403.96			
			Anasco wooden bridge.....					20,726.05		20,726.05			
			Mayaguez-San German.....	13.5	No records.		6.5	16,500.45	20.0	16,500.45			
			Mirasol Bridge.....					4,986.59		4,986.59			
			San German-Sabana Grande.....				8.0	10,000.00	8.0	10,000.00			
			Sabana Grande-Yaico.....				17.0	69,077.13	17.0	69,077.13			
			Ponce-Yaico.....				33.6	\$181,870.81	33.6	\$181,870.81			
			Yaico Bridge.....					19,996.58		19,996.58			
			Guayanilla Bridge.....					10,295.46		10,295.46			
			Pastillo Bridge.....					8,022.40		8,022.40			
			Talaboa Bridge.....					13,104.48		13,104.48			
			Canas Bridge.....					7,160.32		7,160.32			
			Catano-Rio Piedras.....				4.0	8,291.51	4.0	8,291.51			
			Martin Pena-Bayamon and Bayamon Bridge.....				10.6	\$196,165.94	10.6	\$196,165.94			

* Martin Pena bascule bridge, and 24-meter span wooden bridge, and 2 reinforced concrete bridges, and 4 reinforced concrete culverts.

† Two reinforced concrete bridges over Jacaguas and Guayo Rivers

‡ Gualetea Bridge.

§ Construction of 1.8 kilometers of road to Guayanilla.

EXHIBIT No. 10.—Road construction in Porto Rico to fiscal year 1918-19—Continued.

Road No.	Designation.	Kilo-meters.	Sections.		Completed by Spanish Government.		Completed by United States Military Government.		Completed by the civil government.		Total.	
			Kilo-meters.	Cost.	Kilo-meters.	Cost.	Kilo-meters.	Cost.	Kilo-meters.	Cost.	Kilo-meters.	Cost.
3	Ponce-Rio Piedras.....	200.0	Ponce-Guayama.....						56.0	\$67,621.07	56.0	\$67,621.07
			Portugues Bridge.....							13,511.57		13,511.57
			Bucana Bridge.....							14,739.81		14,739.81
			Ibabon Bridge.....							31,465.46		31,465.46
			Guayama-Arroyo.....						7.0	\$25,216.70	7.0	
			Arroyo-Fuente Blanco.....									
			Mamabo-Patillas.....						4.0	8,212.27	4.0	8,212.27
			Yabucoa-Mamabo.....						17.5	31,000.00	17.5	31,000.00
			Humacao-Yabucoa.....						9.0	43,000.00	9.0	43,000.00
			Cano Yabucoa Bridge.....						15.0	30,800.71	15.0	30,800.71
			Guayanes Bridge.....							22,737.21		22,737.21
			Ingenio y Cortadera bridges.....							24,908.53		24,908.53
			Humacao Bridge.....							11,674.55		11,674.55
			Humacao Playa-Naguabo Playa.....							14,973.19		14,973.19
			5 wooden bridges on pile foundations.....						4.2	19,937.90	4.2	19,937.90
			Boca Santiago Bridge.....							13,400.00		13,400.00
			Naguabo-Naguabo Playa.....							19,792.23		19,792.23
			Rio Santiago Bridge.....						2.0	4,000.00	2.0	4,000.00
			Fajardo-Naguabo Playa.....							9,081.81		9,081.81
			Vueltras Emajagua and Ceiba Bridge.....						18.8	34,870.60	18.8	34,870.60
			Naguabo-Ceiba Bridge.....							22,295.05		22,295.05
4	Cayey-Guayama.....	26.0	Mameyes-Fajardo.....									
			Loiza-Canoanas.....									
			Rio Piedras-Mameyes.....		31.5	\$61,355.12						
			Wooden pile bridge over Grande and Espiritu Santo Rivers.....									
			Mameyes wooden bridge.....									
			Carolina Bridge.....									
			Espiritu Santo Bridge.....									
			Rio Grande Bridge.....									
			Fajardo Bridge.....									
			Construction of culverts.....									
			Quebrada Candelaria Bridge.....									
			Sabana de Luquillo Bridge.....									
Pitahaya-Juan Martin and la Burra bridges.....												
Cayey-Guayama.....												

EXHIBIT No. 10.—Road construction in Porto Rico to fiscal year 1918-19—Continued.

Road No.	Designation.	Kilo-meters.	Sections.		Completed by Spanish Government.		Completed by United States Military Government.		Completed by the civil government.		Total.
			Kilo-meters.	Cost.	Kilo-meters.	Cost.	Kilo-meters.	Cost.	Kilo-meters.	Cost.	
17	Lares-Jayuya (via Utuado).....	38.0									\$2,837.23
18	El Boqueron-Road No. 2 (via Cabo Rojo).....	16.0							5.8	12,500.00	12,500.00
19	San German-El Boqueron (via Lajas).....	14.0							4.5	15,404.40	15,404.40
20	Road No. 11-Morovis										
	Morovis River Bridge.....	38.0			6.0	\$28,292.65					37,192.65
	Morovis-Corcal.....										9,341.50
	Road No. 9-Naranjito.....										23,875.70
21	Coamo-Santa Isabel.....	14.0							6.1	148,941.08	48,941.08
	Road No. 1-Coamo Spring.....								5.0	1,914.90	1,914.90
22	Las Cruces-Comerio (via Cidra).....	20.0							8.2	13,427.72	13,427.72
	Las Cruces-Cidra Bridges.....										5,568.59
	Comerio-Cidra.....										4,800.00
	Road No. 3-Trujillo Alto.....										20,680.06
23	Road No. 3-Trujillo Alto.....	7.0							6.2	2,428.70	2,428.70
	Las Cruces Bridge.....										
	Rio Grande de Loiza Bridge.....										
	Mayaguez-Las Vegas.....	25.0							16.3	43,000.00	43,000.00
	Las Vegas-Maricao.....								7.8	77,329.24	77,329.24
	Naguabo-Juncos.....	27.0							10.4	38,326.38	38,326.38
	Anasco-San Sebastian.....	25.0									1,795.00
	Cabo Rojo-San German.....	12.0							2.9	6,050.00	6,050.00
	Vega Baja-Morovis.....	14.0							7.6	23,213.58	23,213.58
	Quebrada Grande Bridge.....								11.2	50,124.86	50,124.86
	Quebrada Hicoteo Bridge.....										3,280.29
	Comerio-La Plata.....	28.0							2,752.23	2,752.23	2,752.23
	Sabana Grande-Road No. 14.....	26.0							21,002.02	21,002.02	21,002.02
	La Muda-Guaynabo.....	9.0							1,989.03	1,989.03	1,989.03
	Road No. 2-Florida Adentro.....	10.0							5.0	19,994.81	19,994.81
	Reform school-Mayaguez Playa.....	5.5									20,499.01
	Old road Guayama-Ponce.....	20.0							10.0	19,999.76	19,999.76
	San Sebastian-Las Marías.....	15.0							3.8	18,302.30	18,302.30
	Canuy-San Sebastian.....	30.0							14.0	12,060.02	12,060.02
	Hatillo-Road No. 13.....	15.0							1.0	2,370.48	2,370.48
	Lajas-Yauco.....	30.0							4.0	645.96	645.96
	Road No. 9-Tota Alta.....	10.0							4.3	14,994.67	14,994.67
	Orocovis River Bridge.....								4.3	27,751.16	27,751.16
											938.75

Viquines Road	10.0	Viquines Road Land damages Auxiliary technical force, general expenses, traveling expenses, and supplies	10.0	10.0	10.0
Lolisa-Juncos	34.0	Lolisa-Juncos			67,807.50
		Rio Grande de Lolisa Bridge (Road No. 7)			7,121.02
					160,961.92
Total	1,791.0				
		275.0	2,560,927.07	141.7	1,085,697.07
			810.0	5,405,286.02	1,226.7
					\$9,051,910.16

13.3 kilometers abandoned by construction of La Plaka Bridge.

Quebrada Frailes Bridge.

The total shown herewith is \$180,490.78 more than that appearing on the balance sheet of the People of Porto Rico (Exhibit No. 1), due to the fact that said amount has been spent for construction purposes out of the appropriation for construction, maintenance of roads and bridges. The auditor only carries as cost of construction the amounts spent from appropriations for construction purposes.

EXHIBIT No. 11.—Statement showing the location by municipalities and valuation of real estate owned by the insular government, as of June 30, 1919.

Municipalities.	Valuation as of July 1, 1918.	Additions during year.	Deductions during year.	Valuation as of June 30, 1919.
Adjuntas.....	\$2,785.00			\$2,785.00
Aguadilla.....	1,540.00			1,540.00
Agua Buenas.....	801.00		\$129.00	281.00
Albionito.....	1,765.00	\$120.00		1,885.00
Anasco.....	262.00	650.00		912.00
Arecibo.....	108,600.00	357.00		108,957.00
Arroyo.....	200.00			200.00
Barceloneta.....	20,400.00			20,400.00
Barranquitas.....	220.00			220.00
Barros.....	4,558.00		100.00	4,458.00
Bayamon.....	175.00	4,180.00		4,355.00
Cabo Rojo.....	13,926.74	400.00	281.78	14,044.96
Caguas.....	2,140.00			2,140.00
Camuy.....	20.00			20.00
Carolina.....	1,950.00	16,800.00		18,750.00
Cayey.....	230.00		60.00	170.00
Ciales.....	3,338.00			3,338.00
Cidra.....	72.00	140.00		212.00
Coamo.....	210.00			210.00
Culebra.....	20.00			20.00
Dorado.....	550.00		100.00	450.00
Fajardo.....	7,912.00		239.96	7,672.04
Guánica.....	800.00			800.00
Guayama.....	22,130.00			22,130.00
Guayama.....	1,771.70	7,100.00		8,871.70
Hatillo.....	15.00			15.00
Humacao.....	4,174.00		2,200.00	1,974.00
Isabela.....	766.00			766.00
Juana Diaz.....	950.00		55.00	895.00
Lajas.....	9,068.80			9,068.80
Lares.....		501.00		501.00
Las Marias.....	1,220.00			1,220.00
Las Piedras.....	120.00			120.00
Loiza.....	8,754.82			8,754.82
Manati.....	150.00			150.00
Maricao.....	10,180.00			10,180.00
Mayaguez.....	55,643.62			55,643.62
Naguabo.....		100.00		100.00
Naranjito.....	1,062.00		50.00	1,012.00
Patillas.....	720.00			720.00
Ponce.....	30,282.00	1,560.00	50.00	31,822.00
Quebradillas.....	115.00			115.00
Rincon.....	50.00			50.00
Rio Grande.....	120.00			120.00
Rio Piedras.....	46,338.00	990.00		47,328.00
Sabana Grande.....	1,111.00			1,111.00
Salinas.....	1,468.00			1,468.00
San German.....	1,400.00			1,400.00
San Juan.....	4,614,085.67	14,180.25	4,170.35	4,624,095.57
San Lorenzo.....	475.00			475.00
San Sebastian.....	1,988.00		1,000.00	988.00
Santa Isabel.....	1,250.00	1,800.00		3,050.00
Toe Alta.....	40.00			40.00
Utusado.....	15,847.00	100.00		15,947.00
Vega Baja.....	2,000.00			2,000.00
Vieques.....	5,728.00			5,728.00
Yabucoa.....	150.00			150.00
Yauco.....	27,320.00			27,320.00
Total.....	5,033,668.35	48,908.25	8,486.99	5,074,179.61

EXHIBIT No. 12.—Statement showing locations and valuations of public buildings, exclusive of real estate, owned by the insular government, as of June 30, 1919.

Buildings and municipalities.	Valuation as of July 1, 1918.	Additions during year.	Deductions during year.	Valuation as of June 30, 1919.
Adjuntas: Rural school, Barrio Pastillo.....	\$250.00			\$250.00
Aguada: Rural school, Barrio Atalaya.....	250.00			250.00
Agua Buenas:				
Rural school, Barrio Jagueyes.....	250.00			250.00
Rural school, Barrio Mulas.....	250.00			250.00
Albionito:				
Road house No. 21, Carretera No. 1.....	400.00			400.00
Road house No. 22, Carretera No. 1.....	750.00	\$450.00		1,200.00
Road house No. 23, Carretera No. 1.....	750.00			750.00
Rural school, Barrio Casey Abajo.....	250.00			250.00

EXHIBIT No. 12.—Statement showing locations and valuations of public buildings exclusive of real estate, owned by the insular government, as of June 30, 1919—Con.

Buildings and municipalities.	Valuation as of July 1, 1918.	Additions during year.	Deductions during year.	Valuation as of June 30, 1919.
Anasco: Wooden house in parcel of land in Reg. 3 of Anasco.....		\$50.00		\$50.00
Arecibo:				
Sanitation office.....	\$1,400.00			1,400.00
Sanitation stable.....	3,300.00			3,300.00
District court and police quarters.....	16,580.00			16,580.00
District jail building.....		75,386.00		75,386.00
Municipal court building.....	5,000.00	80.00		5,080.00
A cement well.....		694.00		694.00
Arroyo: Rural school, Barrio Antigua.....	250.00			250.00
Barros:				
Frame building, town.....	1,600.00			1,600.00
Rural school, Barrio Barros.....	250.00			250.00
Bayamon:				
Road house No. 1, Carretera No. 2.....	250.00			250.00
Road house No. 2, Carretera No. 2.....	750.00			750.00
Cabo Rojo: Reform school.....	118,498.23			118,498.23
Caguas:				
Government building.....	2,000.00			2,000.00
Road house No. 10, Carretera No. 1.....	100.00			100.00
Road house No. 11, Carretera No. 1.....	50.00			50.00
Road house No. 12, Carretera No. 1.....	100.00			100.00
Road house No. 13, Carretera No. 1.....	500.00			500.00
Road house No. 14, Carretera No. 1.....	150.00			150.00
Road house No. 15, Carretera No. 1.....	750.00			750.00
Road house No. 16, Carretera No. 1.....	750.00			750.00
Camuy:				
Rural school, Barrio Camuy Arriba.....	250.00			250.00
Rural school, Barrio Piedra Gorda.....	250.00			250.00
Rural school, Barrio Puente.....	250.00			250.00
Rural school, Barrio Yeguada.....	250.00			250.00
Cayey:				
Road house No. 2, Carretera No. 4.....	1,000.00			1,000.00
Road house No. 17, Carretera No. 1.....	750.00			750.00
Road house No. 18, Carretera No. 1.....	750.00			750.00
Road house No. 19, Carretera No. 1.....	750.00			750.00
Road house No. 20, Carretera No. 1.....	750.00			750.00
Road house.....	750.00			750.00
Coamo:				
Road house No. 24, Carretera No. 1.....	600.00			600.00
Road house No. 25, Carretera No. 1.....	750.00			750.00
Road house No. 26, Carretera No. 1.....	750.00			750.00
Culebra:				
Public building and cistern.....	3,396.61			3,396.61
Rural school.....	140.00			140.00
Fajardo:				
Customhouse.....	1,080.00			1,080.00
Wooden house.....		1,500.00		1,500.00
Guayama:				
Offices, irrigation service.....	5,000.00			5,000.00
Sanitation stable.....	2,810.00			2,810.00
District jail.....	12,448.17			12,448.17
Road house No. 3, Carretera No. 4.....	3,000.00			3,000.00
Road house No. 4, Carretera No. 4.....	750.00			750.00
Guaynabo:				
Rural school, Barrio Guaraguao.....	250.00			250.00
Rural school, Barrio "Pueblo Viejo".....	250.00			250.00
Hatillo:				
Rural school, Barrio Bavaney.....	250.00			250.00
Rural school, Barrio Yeguada Occidental.....	250.00			250.00
Rural school, Barrio Pajul.....	250.00			250.00
Humacao:				
Registrar of property and post office build- ing.....		2,200.00		2,200.00
District jail.....	24,983.61			24,983.61
Rural school, Barrio Buena Vista.....	250.00			250.00
Jayuya: Rural school, Barrio Collores.....	250.00			250.00
Juana Diaz:				
Road house No. 27, Carretera No. 1.....	750.00			750.00
Road house No. 28, Carretera No. 1.....	500.00			500.00
Wooden house.....		25.00		25.00
Las Marias: Rural school, Barrio Anones.....	250.00			250.00
Mayaguez:				
Captain of the port building.....	5,500.00			5,500.00
Buildings on United States experimental station grounds.....	10,578.64			10,578.64
Sanitation stable.....	2,749.50			2,749.50
Frame building, San Jose Street.....	700.00			700.00
Laboratory building.....	18,000.00	1,042.27		19,042.27
Building for college of agriculture and me- chanic arts.....	67,257.03			67,257.03

EXHIBIT No. 12.—*Statement showing locations and valuations of public buildings, exclusive of real estate, owned by the insular government, as of June 30, 1919—Con.*

Buildings and municipalities	Valuation as of July 1, 1918.	Additions during year.	Deductions during year.	Valuation as of June 30, 1919.
Mayaguez—Continued.				
Frame building, Mona Island.....	\$590.00			\$590.
Road house No. 1, Carretera No. 2 to Anasco.....	750.00			750.
Road house No. 2, Carretera No. 2 to Anasco.....	750.00			750.
Road house No. 1, Carretera No. 2 to Yauco.....	750.00			750.
Road house No. 2, Carretera No. 2 to Yauco.....	750.00			750.
Moca:				
Rural school, Barrio Centro.....	250.00			250.
Rural school, Barrio Aceituna Abajo.....	250.00			250.
Morovis:				
Rural school, Barrio Guzman.....	250.00			250.
Rural school, Barrio Perchas.....	250.00			250.
Rural school, Barrio Franquez.....	250.00			250.
Naranjito: Rural school, Barrio Guadana.....	250.00			250.
Penuelas: Rural school, Barrio Coto.....	250.00			250.
Ponce:				
Blind asylum.....	45,000.00			45,000.
Insular courts and jails.....	109,000.00			109,000.
Captain of the port building.....	4,000.00			4,000.
Sanitation office.....	1,380.00			1,380.
Sanitation stable.....	5,000.00			5,000.
Road house No. 29, Carretera No. 1.....	500.00			500.
Road house No. 30, Carretera No. 1.....	500.00			500.
Road house No. 31, Carretera No. 1.....	500.00			500.
Road house No. 1, Carretera No. 6.....	750.00			750.
Road house No. 2, Carretera No. 6.....	750.00			750.
Rio Piedras:				
Police barracks.....	3,600.00			3,600.
Convalescencia Park.....	1,439.61			1,439.
Experimental station buildings.....	22,162.27	\$86.53	\$1,042.27	21,206.
Road house No. 4, Carretera No. 1.....	500.00			500.
Road house No. 5, Carretera No. 1.....	150.00			150.
Road house No. 6, Carretera No. 1.....	160.00			160.
Road house No. 7, Carretera No. 1.....	160.00			160.
Road house No. 8, Carretera No. 1.....	160.00			160.
Road house No. 9, Carretera No. 1.....	600.00			600.
Sabana Grande:				
Frame building.....	40.00			40.
Rural school, Barrio Rincon.....	250.00			250.
San Juan:				
Insane asylum.....	203,240.00			203,240.
Governor's palace.....	159,578.72			159,578.
Boys' charity school.....	159,340.58			159,340.
Military hospital.....	122,180.00			122,180.
Legislative assembly building.....	92,279.96			92,279.
Intendencia building.....	80,150.00			80,150.
Pabellon de San Juan.....	5,340.00			5,340.
Pabellones del Estado Mayor.....	21,750.00			21,750.
Office of the executive secretary of Porto Rico.....	6,580.00	5,180.00		11,760.
Pink Palace.....	93,650.00		36,110.00	57,540.
Masonry building used for offices of the insular government.....		34,209.00		34,209.
Penitentiary.....	92,008.50			92,008.
Captain of the port building.....	2,300.00			2,300.
Sanitation stable.....	10,012.93			10,012.
Education warehouse.....	6,000.00			6,000.
Police headquarters.....	17,600.00	11,690.00		11,690.
Interior warehouse.....	7,070.89			7,070.
Naval hospital.....	4,713.90			4,713.
Girls' charity school.....	88,400.00			88,400.
Police barracks, Seboruco.....	800.00			800.
Sanitary laundry.....	920.98			920.
Quarantine hospital.....	14,416.84			14,416.
Sick animals quarantine.....	262.66			262.
Quartermaster's dock.....	6,020.00			6,020.
Sanitation offices, Ieper colony.....	4,869.87			4,869.
Road house No. 1, Carretera No. 1.....	300.00			300.
Road house No. 2, Carretera No. 1.....	350.00	640.00		990.
Road house No. 3, Carretera No. 1.....	120.00			120.
San Lorenzo: Rural school, Barrio Florida.....	245.00			245.
Vega Alta: Rural school, Barrio Cienegueta.....	250.00			250.
Vega Baja:				
Rural school, Barrio Almirante Norte.....	250.00			250.
Rural school, Barrio Almirante Sur.....	250.00			250.
Rural school, Barrio Rio Prieto.....	250.00			250.
Rural school, Barrio Sierra Alta.....	500.00			500.
Vieques: Vieques jail.....	7,600.00			7,600.
Total.....	1,736,454.45	133,232.80	37,152.27	1,832,534.98

EXHIBIT No. 13.—*Statement of accrued trust fund liabilities, as of June 30, 1919.*

[Receipts and expenditures not to be confused with those on cash basis, Exhibit No. 31.]

REDEMPTION FUND—ROAD IMPROVEMENT BONDS.

Balance as of July 1, 1918.....	\$957,563.27	
Property tax collections.....	248,194.86	
Delinquent taxes as of June 30, 1919.....	4,805.04	
Total.....		1,210,713.26
Interest on \$875,000 4 per cent bonds, payable Dec. 31, 1918.....	\$17,500.00	
Interest on \$825,000 4 per cent bonds, payable June 30, 1919.....	16,500.00	
Bonds retired under sinking fund requirements, Dec. 31, 1918.....	50,000.00	
Repayment of taxes improperly collected.....	226.29	
		84,226.29
Balance as of June 30, 1919.....		\$1,126,486.97

MUNICIPAL BOND FUNDS.

Deduction from taxes collected for municipalities.....	71,893.89	
Interest on bonds for year.....	71,893.89	

CONSTRUCTION OF HARBOE IMPROVEMENTS AT SAN JUAN.

Balance as of July 1, 1918.....	\$99,897.85	
Income billed.....	50.00	
Total.....	99,947.85	
Construction work.....	58,981.41	
Balance as of June 30, 1919.....		40,966.44

SAN JUAN HARBOR FUND.

Balance as of July 1, 1918.....	90,282.78	
Miscellaneous receipts.....	23,964.78	
Transfers.....	21,719.19	
Total.....	135,966.73	
Interest on \$600,000 4 per cent bonds for year.....	24,000.00	
Balance as of June 30, 1919.....		111,966.73

SCHOOL BOARD BOND FUNDS.

Deductions from taxes collected for school boards.....	22,992.50	
Interest on bonds for year.....	22,992.50	

UNIVERSITY FUND.

Balance as of July 1, 1918.....	40,800.35	
Proportion of court fees and fines.....	\$46,722.00	
Proportion of sanitary fines.....	2,731.38	
Rent of escheated inheritance.....	1,301.97	
Rent of property.....	1,697.77	
Sale of farm products.....	2,014.08	
Miscellaneous.....	2,631.18	
		57,098.38
Total.....	97,907.73	
Expenses.....	59,441.63	
Balance as of June 30, 1919.....		38,466.10

UNIVERSITY INCOME FUND.

Balance as of July 1, 1918.....	1,302.50	
Income from securities owned.....	349.32	
Total.....	1,651.82	
Expenses.....	1,477.23	
Balance as of June 30, 1919.....		174.59

ESCHEATED INHERITANCE FUND.

Balance as of June 30, 1919.....		476.65
----------------------------------	--	--------

UNIVERSITY AGRICULTURAL FUND.

Balance as of July 1, 1918.....	255.74	
Federal appropriation, Morrill-Hatch Act.....	50,000.00	
Interest on bank deposits.....	598.79	
Miscellaneous.....	132.46	
Transfers.....	524.81	
Total.....	51,511.80	
Expenditures.....	\$51,143.14	
Transfers.....	368.66	
		51,511.80

PERMANENT UNIVERSITY FUND.

Balance as of July 1, 1918.....	\$534.73
Interest on bank balances.....	116.43
Total.....	651.16
Victory bonds.....	500.00

Balance as of June 30, 1919..... \$151.16

SCHOOL BUILDING FUND.

Balance as of July 1, 1918.....	80,934.58
Interest of loans.....	\$822.80
Repayment on principal of loans.....	8,259.01
Miscellaneous receipts.....	276.54
Transfers.....	3,209.84
Total.....	12,568.19
Expenditures.....	20,122.32
Advances to special disbursing officers.....	5,000.00
Transfers.....	2,109.84
Total.....	27,232.16

Balance as of June 30, 1919..... 66,270.61

SCHOOL EXTENSION FUND.

Balance as of June 30, 1919..... 580.40

IRRIGATION FUND.

Construction:		
Balance as of July 1, 1918.....	3,576.46	
Proceeds of the sale of bonds.....	\$34,840.00	
Collect'ns during the year.....	807.57	
Repayments.....	1,561.80	
Total.....	37,009.37	
Construction expenditures.....	3,485.81	
Transfers.....	20,000.75	
Total.....	23,486.56	
Balance.....		17,099.26
Operation:		
Balance as of July 1, 1918.....	23,186.49	
Repayment of unexpended balances by special disbursing officers.....	12,000.00	
Proceeds of the sale of bonds.....	80,948.84	
Revenues from taxation.....	359,844.18	
Interest on bank deposits.....	1,680.51	
Miscellaneous receipts.....	113,902.28	
Transfer.....	75,000.75	
Loan from insular government.....	125,000.00	
Total.....	768,376.54	
Operation expenses.....	168,559.76	
Bonds retired.....	150,000.00	
Interest on bonds.....	197,340.00	
Advances to special disbursing officers.....	12,000.00	
Loan returned to insular government.....	125,000.00	
Transfer.....	70,000.00	
Total.....	722,899.76	
Balance.....		68,683.20

Balance as of June 30, 1919..... 85,702.55

OUTSTANDING LIABILITIES.

Balance as of July 1, 1918.....	13,515.56
Amounts outstanding transferred during the year.....	4,000.14
Total.....	17,515.70
Old accounts presented for payment.....	2,563.21

Balance as of June 30, 1919..... 14,952.49

REDEMPTION OF MUNICIPAL BONDS.

Balance as of July 1, 1918.....	90,250.00
Deduction from taxes collected for municipalities.....	71,298.78
Total.....	161,543.78
Payments to redeem bonds.....	95,500.00

Balance as of June 30, 1919..... 66,043.78

REDEMPTION OF SCHOOL BOARD BONDS.

Balance as of July 1, 1918.....	\$62,500.00
Deductions from taxes collected for school boards.....	62,500.00
Total	125,000.00
Payments to redeem bonds.....	125,000.00

SANITARY FUND.

Balance as of July 1, 1918.....	3,259.08
Sanitary fines collected during the year.....	2,731.38
Total	5,990.46
Transfers.....	3,733.96

Balance as of June 30, 1919..... \$2,256.50

INSULAR POLICE RELIEF FUND.

Balance as of July 1, 1918.....	2,477.51
Fines imposed on policemen.....	268.41
Total	2,745.92
Repayments to beneficiaries.....	555.80

Balance as of June 30, 1919..... 2,190.12

SALE OF ARTICLES, GIRLS' CHARITY SCHOOL.

Balance as of July 1, 1918.....	1,423.32
Sale of articles.....	268.00
Total	1,691.32
Expenses.....	\$172.13
Transfer.....	249.50
	421.63

Balance as of June 30, 1919..... 1,269.69

SALE OF ARTICLES AND WORK DONE, BOYS' CHARITY SCHOOL.

Balance as of July 1, 1918.....	2,270.06
Sale of articles, band concerts, etc.....	300.99
Total	2,571.05
Expenses.....	1,286.91

Balance as of June 30, 1919..... 1,284.14

SALE OF ARTICLES, PENITENTIARY.

Balance as of July 1, 1918.....	3,920.50
Sale of articles.....	2,400.08
Total	6,320.58
Expenses.....	2,175.98

Balance as of June 30, 1919..... 4,144.60

BOYS' CHARITY SCHOOL, RECREATION FUND.

Balance as of July 1, 1918.....	1,269.11
50 per cent of receipts from band concerts.....	185.00
Total	1,454.11
Expenses.....	282.50

Balance as of June 30, 1919..... 1,171.61

SECURITIES REFUNDING BONDS.

Balance as of June 30, 1919..... 1,260,500.00

SECURITIES LOAN FUND.

Balance as of June 30, 1919..... 401,000.00

WORKMEN'S RELIEF TRUST FUND.

Balance as of July 1, 1918.....	34,491.23
Collections during year.....	122,294.67
Repayment of unexpended balance by special disbursing officer.....	1,000.00
Total	157,785.90
Advances to special disbursing officers.....	\$1,000.00
Expenditures.....	96,677.66
	97,677.66

Balance as of June 30, 1919..... 60,108.24

LA EGIDA DEL MAESTRO.

Balance as of July 1, 1918.....	\$1,027.12	
Collections during year.....	8,110.32	
Total.....	9,137.44	
Transfer.....	8,110.32	
Balance as of June 30, 1919.....		\$1,027.12

ROAD BOND FUND OF 1916.

Balance as of July 1, 1918.....	181,305.30	
Proceeds of the sale of bonds.....	403,220.00	
Repayment of unexpended balances by special disbursing officers.....	2,287.46	
Miscellaneous.....	4,017.69	
Transfers.....	535,157.87	
Total.....	1,215,988.32	
Advances to special disbursing officers.....	\$16,462.39	
Expenses.....	358,144.06	
Transfers.....	536,677.61	
	911,284.06	
Balance as of June 30, 1919.....		304,704.26

SALE OF ARTICLES AND WORK DONE, REFORM SCHOOL.

Balance as of July 1, 1918.....	31.14	
Sale of articles.....	4.06	
Balance as of June 30, 1919.....		35.14

RECREATION FUND REFORM SCHOOL.

Balance as of July 1, 1918.....	23.93	
50 per cent of receipts from sale of articles.....	4.00	
Total.....	27.93	
Expenses.....	1.65	
Balance as of June 30, 1919.....		26.28

WHARF AND HARBOR FUND.

Collections during the year.....	36,070.39	
Repayment of unexpended balance by special disbursing officer.....	553.33	
Total.....	36,623.72	
Advances to special disbursing officer.....	\$1,500.00	
Expenses.....	13,404.53	
Transfers.....	21,719.19	
	36,623.72	

MARKET FOR FOOD COMMISSION.

Balance as of July 1, 1918.....	716.55	
Repayment of unexpended balance by special disbursing officer.....	14.56	
Total.....	731.11	
Advances to special disbursing officer.....	\$65.00	
Expenses.....	666.11	
	731.11	

SALE OF FARM PRODUCTS.

Balance as of July 1, 1918.....	3,620.01	
Sale of farm products, Insular experimental station.....	5,421.88	
Repayment of unexpended balance by special disbursing officer.....	200.00	
Total.....	9,241.89	
Expenses.....	\$4,166.14	
Advances to special disbursing officer.....	200.00	
	4,366.14	

Balance as of June 30, 1919..... 4,875.75

FUND FOR THE PROTECTION OF COFFEE.

Collections during the year.....	6,780.58	
Expenses.....	898.33	
Balance as of June 30, 1919.....		5,888.25

CAPITOL BUILDING FUND.

Sale of land.....	11,145.20	
Balance as of June 30, 1919.....		11,145.20

MUNICIPAL BOND REDEMPTION TAX.

Balance as of July 1, 1918:		
San Juan.....	\$69,096.28	
Barranquitas.....	500.51	
Guayama.....	5,109.93	
Maunabo.....	3,343.59	
Arroyo.....	1,168.67	
San Juan.....	18,619.18	
		\$97,838.16
Collections during the year:		
San Juan.....	111,895.70	
Ponce.....	2.42	
Arecibo.....	3.27	
Barranquitas.....	919.97	
Guayama.....	12,419.06	
Maunabo.....	1,686.16	
Arroyo.....	3,108.32	
San Juan (special).....	62,656.14	
		192,091.04
Total.....		<u>290,529.20</u>

Expenditures during the year:

San Juan—		
Interest paid.....	\$45,750.00	
Refunds.....	25.66	
		45,775.66
Ponce, refunds.....		2.42
Arecibo, refunds.....		3.27
Barranquitas—		
Bonds retired.....	1,000.00	
Interest paid.....	168.75	
Refunds.....	104.79	
		1,273.54
Guayama—		
Bonds retired.....	9,000.00	
Interest paid.....	5,245.00	
Refunds.....	3,021.35	
		17,286.35
Maunabo, interest paid.....		333.95
Arroyo—		
Bonds retired.....	2,000.00	
Interest paid.....	1,372.50	
Refunds.....	92.17	
		3,464.67
San Juan (special)—		
Bonds retired.....	30,000.00	
Interest paid.....	17,100.00	
Refunds.....	7.74	
		47,107.74
Total.....		<u>115,247.60</u>

Balance as of June 30, 1919—

San Juan.....	135,216.32
Barranquitas.....	146.94
Guayama.....	242.64
Maunabo.....	4,695.80
Arroyo.....	812.32
San Juan (special).....	34,167.58

\$175,281.60

TEACHERS' PENSION FUND.

Collections during year.....	15,630.88
Transfer.....	8,858.41
Total.....	<u>24,489.29</u>
Pensions paid during year.....	<u>347.38</u>

Balance as of June 30, 1919..... 24,141.91

MISCELLANEOUS TRUST FUND.

Expenses, sale of government property.....	332.39
United States (account of firearms).....	307.20
Homestead trust fund.....	303.42
Forest fund.....	62.15
Maintenance of artesian well, Quebradillas.....	1.48
Condemnation proceedings funds.....	50.00
Magazine publishing fund.....	281.87
Balance as of June 30, 1919.....	<u>1,338.51</u>
Total trust-fund balances.....	<u>3,814,667.39</u>

EXHIBIT No. 14.—*Interest-bearing indebtedness of the insular government June 30, 1919—Bond issues.*

Authorization.	Description.	Date of—		Rate of interest, per cent.	Amount—			Interest payable.	Balance in sinking fund June 30, 1919.
		Issue.	Maturity.		Authorized.	Issued.	Outstanding.		
Acts Mar. 8, 1906, and Feb. 13, 1907.	Road construction, series of \$20,000, payable yearly beginning Jan. 1, 1908.	Jan. 1, 1907	Jan. 1, 1927	4	\$1,000,000	\$1,000,000	\$400,000	Jan. 1, July 1.	\$463,000.00
Act No. 25, Mar. 10, 1910.	Road construction, redeemable after Jan. 1, 1920.	Jan. 1, 1910	Jan. 1, 1927	4	425,000	425,000	425,000	do.	552,500.00
Act No. 23, Mar. 28, 1914.	Public improvement bonds, redeemable on Jan. 1, 1925.	Jan. 1, 1914	Jan. 1, 1939	4	1,000,000	1,000,000	1,000,000	do.	106,021.98
Act No. 71, Apr. 13, 1916.	Public improvement bonds, first series of \$100,000 redeemable on Jan. 1, 1927.	Jan. 1, 1916	Jan. 1, 1930	4	2,000,000	500,000	500,000	do.	
Act No. 71, Apr. 13, 1916.	Public improvement bonds, series of \$100,000 payable yearly beginning Jan. 1, 1927.	Jan. 1, 1918	Jan. 1, 1930	4		500,000	500,000	do.	
Act Sept. 18, 1908.	Irrigation series of \$150,000 payable yearly after 5 years.	Jan. 1, 1909	Jan. 1, 1933	4	3,000,000	3,000,000	2,100,000	do.	
Act No. 74, Mar. 9, 1911.	Irrigation, redeemable after Jan. 1, 1933.	Jan. 1, 1913	Jan. 1, 1943	4	1,000,000	1,000,000	1,000,000	do.	
Act No. 128 Aug. 8, 1913.	Irrigation, series of \$100,000 payable yearly beginning Jan. 1, 1944.	Oct. 1, 1913	Jan. 1, 1950	4	700,000	700,000	700,000	do.	
Act No. 128 Aug. 8, 1913; J. Res. No. 12, Mar. 28, 1914.	Irrigation, series of \$100,000 payable yearly beginning Jan. 1, 1931.	Jan. 1, 1914	Jan. 1, 1934	4	400,000	400,000	400,000	do.	
Act No. 128 Aug. 8, 1913.	Irrigation, series of \$100,000 payable yearly beginning Jan. 1, 1935.	July 1, 1915	Jan. 1, 1938	4	1,700,000	400,000	400,000	do.	
Do.	Irrigation, series of \$100,000 payable yearly beginning Jan. 1, 1939.	Jan. 1, 1916	Jan. 1, 1930	4	200,000	200,000	200,000	do.	
Act No. 23, Nov. 22, 1917.	Irrigation, series of \$100,000 payable yearly beginning Jan. 1, 1938.	Jan. 1, 1919	Jan. 1, 1939	4	200,000	117,000	117,000	do.	
Act No. 45, Mar. 7, 1912.	San Juan Harbor improvement, first issue redeemable after 10 years from date of issue.	Jan. 1, 1912	Jan. 1, 1937	4	100,000	100,000	100,000	do.	
Do.	San Juan Harbor improvement, second issue redeemable after 10 years from date of issue.	Jan. 1, 1914	Jan. 1, 1939	4	500,000	200,000	200,000	do.	111,822.38
Do.	San Juan Harbor improvement, third issue redeemable after 10 years from date of issue.	Jan. 1, 1915	Jan. 1, 1940	4	200,000	200,000	200,000	do.	
Act No. 23, Apr. 12, 1917.	San Juan Harbor improvement, redeemable after 10 years from date of issue.	Jan. 1, 1917	Jan. 1, 1942	4	130,000	100,000	100,000	do.	
Act No. 120, July 20, 1913.	Refunding bonds, first series of \$100,000 due July 1, 1923.	Jan. 1, 1914	July 1, 1933	4	1,000,000	655,000	655,000	do.	
Do.	Refunding bonds, first series of \$21,000 payable July 1, 1919.	July 1, 1915	July 1, 1935	4	300,000	300,000	279,000	do.	
Do.	Refunding bonds, series of \$30,000 payable yearly beginning July 1, 1918.	July 1, 1916	July 1, 1927	4	300,000	300,000	240,000	do.	
Total bonded indebtedness.					12,525,000	11,097,000	9,516,000		1,253,844.31

Temporary loan from The Mechanics and Metals National Bank of New York					
Temporary loans to provide funds in accordance with act No. 8, approved Dec. 12, 1918:					
From American Colonial Bank of Porto Rico	\$40,000				
From Banco Territorial y Agrícola, San Juan, P. R.	40,000				
From Banco Commercial de Puerto Rico	40,000				
From Royal Bank of Canada, San Juan, P. R.	40,000				
From Bank of Nova Scotia, San Juan, P. R.	40,000				
From National City Bank of New York, San Juan, P. R.	40,000				
Total indebtedness	12,525,000	11,067,000	10,050,000		1,233,344.31

EXHIBIT No. 15.—*University of Porto Rico—Balance sheet, June 30, 1919.*

ASSETS.

Cash in hands of treasurer of Porto Rico:		
University fund.....	\$37,154.61	
University income fund.....	174.59	
Permanent university fund.....	151.16	
Expenses, University of Porto Rico.....	2.02	
	<u>\$37,482.36</u>	
Cash in hands of secretary-treasurer, University of Porto Rico.....		¹ 10,629.61
Accrued income from escheated inheritances.....		² 1,301.97
Investments:		
Liberty bonds.....	800.00	
Peñuelas bonds.....	10,000.00	
Porto Rico Fruit Exchange stock.....	20.00	
	<u>10,820.00</u>	
Real estate and improvements at Rio Piedras:		
University buildings.....	121,101.98	
Campus and farm.....	38,062.75	
Farm buildings.....	14,907.60	
	<u>174,072.33</u>	
Real estate at Mayaguez owned by The People of Porto Rico and used by the university:		
Buildings of the College of Agriculture and Mechanic Arts.....	49,640.00	
Campus.....	5,500.00	
Farm and buildings.....	12,350.00	
	<u>67,490.00</u>	
Miscellaneous equipment (see Schedule A).....		³ 67,490.00
		<u>110,008.74</u>
Total assets:		
Trustees, University of Porto Rico.....	344,963.08	
The People of Porto Rico.....	67,490.00	
	<u>412,453.08</u>	

LIABILITIES AND CAPITAL.

Liabilities:		
Muñoz Rivera memorial fund.....	58.85	
Students' Army Training Corps fund.....	10,570.76	
	<u>10,629.61</u>	
Capital:		
Trustees, University of Porto Rico.....	334,333.42	
The People of Porto Rico.....	67,490.00	
	<u>401,823.42</u>	
		<u>412,453.03</u>

¹ Not included in the assets of the university as shown on Exhibit No. 1.² See Exhibit No. 13.³ Included in public buildings and improvements, Exhibit No. 1.⁴ The difference between this amount and that shown in Exhibit No. — is the total of those items stated in the preceding notes.EXHIBIT No. 15, SCHEDULE A.—*University of Porto Rico—Detailed statement of miscellaneous equipment.*

	Rio Piedras.	Mayaguez.	Total.
Library books.....	\$7,440.65	\$4,013.87	\$11,454.52
Textbooks.....	10,125.73	1,410.26	11,535.99
Scientific apparatus.....	13,904.88	15,586.65	29,491.53
Athletic and military equipment.....	994.50	799.85	1,794.35
Machinery and tools.....	6,619.38	19,278.62	25,898.00
Vehicles and harness.....	247.23	5,027.18	5,274.41
Furniture and fixtures.....	13,995.43	8,860.00	22,855.43
Live stock.....	300.00	2,412.51	2,712.51
Total.....	<u>53,627.80</u>	<u>57,008.94</u>	<u>110,636.74</u>

EXHIBIT No. 16.—*University of Porto Rico—Surplus account, June 30, 1919.*

Balance as of July 1, 1918.....		\$343,770.67
Appropriations:		
Federal: Morrill-Nelson fund.....	\$50,000.00	
Insular: Expenses, University of Porto Rico.....	49,291.00	
		99,921.00
Revenues:		
Court fines and fees.....	42,819.33	
Income from escheated inheritances.....	1,301.97	
		44,121.30
Other income:		
Students' fees, Rio Piedras.....	4,464.58	
Rent of farm and buildings, Rio Piedras.....	1,767.27	
Sale of farm produce, Mayaguez.....	2,296.75	
Interest on investments.....	465.75	
Interest on Morrill-Nelson fund.....	589.39	
Miscellaneous.....	8.00	
		9,586.74
Net gain on property sold.....		531.79
Property received by transfer from The People of Porto Rico.....		4,803.55
		502,735.05
Operating expenses, as per Exhibit No. 17:		
College of Agriculture and Mechanic Arts.....	51,582.46	
Rio Piedras colleges.....	89,021.82	
Office, board of trustees.....	4,201.37	
		144,805.65
Property transferred to The People of Porto Rico.....		4,004.37
Depreciation:		
Property destroyed by earthquake and fire.....	18,631.17	
Property condemned.....	900.44	
		19,531.61
Surplus as of June 30, 1919.....		334,333.42
		502,735.05

EXHIBIT No. 17.—*University of Porto Rico—Detailed statement of operating expenses for the year ending June 30, 1919.*

College of Agriculture and Mechanic Arts:		
Salaries of teachers.....	\$32,410.64	
Teachers' pension fund.....	310.34	
Other salaries and wages.....	4,209.57	
Repairs and maintenance.....	5,648.54	
Office supplies and expenses.....	635.58	
School supplies.....	3,679.76	
Farm expenses.....	2,192.18	
Telephone and telegraph.....	99.59	
Light, water, and power.....	303.82	
Travel.....	219.40	
Catalogue and advertising.....	179.71	
Supervision of mechanic arts in the public schools.....	1,693.33	
		\$51,582.46
Rio Piedras colleges:		
Salaries of teachers.....	55,489.91	
Teachers' pension fund.....	554.01	
Other salaries and wages.....	9,262.34	
Repairs and maintenance.....	13,956.29	
Office supplies and expenses.....	978.47	
School supplies.....	4,146.05	
Telephone and telegraph.....	158.83	
Light, water, and power.....	361.50	
Travel.....	5.60	
Catalogue and advertising.....	255.49	
Supervision of agriculture and home economics in the public schools.....	3,853.33	
		80,021.82
Office, board of trustees:		
Salaries.....	3,293.78	
Office supplies and maintenance.....	115.17	
Telephone and telegraph.....	61.94	
Travel.....	730.48	
		4,201.37
Total.....		146,800.94

EXHIBIT No. 18.—*University of Porto Rico—Additions to, and deductions from, capital accounts for the period from July 1, 1918, to June 30, 1919.*

	Total, July 1, 1918.	Net additions during year.	Net deductions during year.	Total, June 30, 1919.
A.—RIO PIEDRAS.				
Real estate and improvements, board of trustees.....	\$170,062.33			\$170,062.33
Miscellaneous equipment:				
Library books.....	6,257.12	\$1,183.53		7,440.65
Textbooks.....	7,925.94	2,198.79		10,125.73
Scientific apparatus.....	12,620.91	1,283.97		13,904.88
Athletic and military equipment.....	1,844.95		\$850.45	994.50
Machinery and tools.....	7,600.02		981.44	6,618.58
Vehicles and harness.....	264.23		17.66	247.28
Furniture and fixtures.....	15,451.62		1,456.19	13,995.43
Live stock.....	300.00			300.00
Total.....	52,265.59	1,362.21		53,627.80
B.—MATAGUEZ.				
Real estate, The People of Porto Rico.....	94,180.00		126,690.00	67,490.00
Miscellaneous equipment:				
Library books.....	5,208.28		1,189.41	4,018.87
Textbooks.....	2,649.30		1,239.04	1,410.26
Scientific apparatus.....	21,474.41		5,937.76	15,536.65
Athletic and military equipment.....	918.14		118.29	799.85
Machinery and tools.....	17,045.74	2,282.88		19,278.62
Vehicles and harness.....	2,299.92	2,727.26		5,027.18
Furniture and fixtures.....	11,797.17		3,237.17	8,560.00
Live stock.....	2,128.51	284.00		2,412.51
Total.....	63,516.47		6,477.63	57,038.94
C.—TOTAL FOR THE UNIVERSITY.				
Real estate and improvements.....	268,242.33		126,690.00	241,552.33
Miscellaneous equipment:				
Library books.....	11,460.40		5.88	11,454.52
Textbooks.....	10,575.24	960.75		11,536.99
Scientific apparatus.....	34,096.32		4,653.79	29,441.53
Athletic and military equipment.....	2,763.09		968.74	1,794.35
Machinery and tools.....	24,646.56	1,251.44		25,898.00
Vehicles and harness.....	2,564.15	2,710.26		5,274.41
Furniture and fixtures.....	27,248.79		4,698.36	22,550.43
Live stock.....	2,428.51	284.00		2,712.51
Total.....	115,782.06		5,115.32	110,666.74

¹ Total deductions due to earthquake and fire, \$35,870; total additions due to new construction, \$9,180.

EXHIBIT No. 19.—Statement showing the amount of taxes pending on June 30, 1919.

Municipality.	1901-2	1902-3	1903-4	1904-5	1905-6	1906-7	1907-8	1908-9	1909-10	1910-11	1911-12	1912-13	1913-14
Adjuntas.....													
Aguada.....													
Aguadilla.....											\$1.44	\$1.44	\$1.44
Aguas Buenas.....													
Aibonito.....													
Anasco.....													
Arecibo.....													
Arroyo.....													
Barceloneta.....													
Barranquitas.....													
Barros.....													
Bayamon.....													
Cabo Rojo.....													
Caguas.....													
Camuy.....													
Carolina.....													
Cayey.....													
Celba.....													
Clares.....													
Cidra.....													
Coamo.....													
Comerio.....													
Corozal.....													
Culebra.....													
Dorado.....													
Fajardo.....													
Guanica.....													
Guayama.....													
Guayanilla.....													
Guaynabo.....													
Gurabo.....													
Hatillo.....													
Hormigueros.....													
Humacao.....													
Isabela.....													
Jayuya.....													
Juana Diaz.....													
Juncos.....													
Lajas.....													
Lares.....													
Las Marias.....													
Las Piedras.....													
Loiza.....													
Luquillo.....													
Manati.....											1.20		
Maricao.....													
Maunabo.....												313.16	
Mayaguez.....													
Moca.....													
Morovis.....													
Naguabo.....													
Naranjito.....													
Patillas.....													
Penuelas.....													
Ponce.....													
Quebradillas.....													
Rincon.....													
Rio Grande.....													
Rio Piedras.....													
Sabana Grande.....			\$1.06										
Salinas.....													
San German.....													
San Juan.....					\$39.30	\$38.12	\$38.12	\$38.08	\$66.03	\$177.92	136.38	95.44	215.70
San Lorenzo.....													
San Sebastian.....													
Santa Isabel.....													
Toa Alta.....													
Toa Baja.....													
Trujillo Alto.....			2.52	2.50	2.76	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
Utundo.....	\$32.96	\$56.42	42.60	30.90	3.24	3.54							
Vega Alta.....													
Vega Baja.....													
Vieques.....													
Villaiba.....													
Yabucoa.....													
Yauco.....													
Corporations.....													
Total.....	32.96	56.42	46.18	33.40	45.30	44.06	40.52	40.48	68.48	180.32	141.42	112.44	219.54

for fiscal years 1901-2 to 1918-19, percentage, and reasons why they are pending.

1914-15	1915-16	1916-17	1917-18	Total.	1918-19	Grand total.	P. ct. pending June 30, 1919, all fiscal years.	Pending judicial action.	Payments extended.	Probably uncollectible.	In claims.
			\$2.76	\$2.76	\$267.24	\$270.00	(1)		\$252.24	\$17.76	
\$1.44	\$1.44	\$1.74	8.16	17.10	40.74	57.84	(1)		24.24	33.60	
6.12				6.12		6.12	(1)			6.12	
11.70		1.46		13.16	9.00	22.16	(1)			22.16	
16.20	26.40	5.08	91.20	138.88	436.98	575.86	0.002		523.06	52.80	
39.15	16.26	103.50	316.26	525.17	756.90	1,282.07	.001	\$288.40	104.28	588.75	\$300.64
	9.60			9.60	42.36	51.96	(1)		42.36	9.60	
6.00	12.12	5.82	31.32	55.26	74.88	130.14	.001		7.68	120.66	1.80
40.14	32.04	59.42	96.34	226.94	370.74	597.68	.001		463.62	122.42	11.64
2.40	36.60	11.62	89.64	140.26	125.64	265.90	(1)		47.28	218.62	
					24.24	24.24	(1)			24.24	
5.76				5.76	2.16	7.92	(1)			7.92	
2.60	51.00	8.72	33.00	96.32	100.32	196.64	(1)			191.72	4.92
			34.68	34.68	34.68	69.36	(1)		69.36		
	4.80		15.66	20.46	60.06	80.52	(1)		21.46	59.06	
			5.04	5.04	25.68	30.72	(1)	10.08		20.64	
					9.00	9.00	(1)		9.00		
		4.36		4.36	4.44	8.80	(1)		4.44	4.36	
10.20	1.20	2.90		14.30	5.16	19.46	(1)		5.16	14.30	
3.60			3.00	6.60	7.80	14.40	(1)		6.00	8.40	
3.00	5.88	18.14	13.20	40.82	33.60	74.42	.001			74.42	
20.40	21.76	5.60	24.42	72.18	163.10	235.28	(1)		154.26	81.02	
2.28	2.28	4.94	17.28	26.78	22.08	48.86	(1)		48.86		
00.00	1.20			61.20	42.00	103.20	(1)			103.20	
12.84	9.24	11.18	2.40	35.66	63.30	98.90	(1)	60.00		38.06	.90
3.96		16.21	22.32	42.49	15.60	58.09	(1)			54.82	3.27
					24.00	24.00	(1)			24.00	
			2.40	2.40	28.44	30.84	(1)		30.84		
12.00	3.60	26.98	12.60	55.18	27.60	82.78	(1)	26.98	18.00	24.60	13.20
9.00				9.00		9.00	(1)			9.00	
9.60	1.80	8.70		20.10	6.90	27.00	(1)		8.06	23.94	
		2.18		2.18	40.20	42.38	(1)		39.60	2.18	.60
			341.88	341.88	1,680.06	2,021.94	.008	370.68	1,643.46	1.80	6.00
2.16				2.16	231.86	233.52	.006			2.16	231.36
	1.50		15.06	16.58	15.18	31.76	(1)		19.80	11.96	
					2.52	2.52	(1)		1.08	1.44	
		15.66	18.36	35.22	67.92	103.14	(1)		45.96	55.98	1.20
			54.90	54.90	165.30	220.20	(1)		220.20		
24.18	39.60	28.28	32.82	438.04	2,134.86	2,572.90	.002	396.67	2,049.81	124.38	2.04
					1.92	1.92	(1)		1.92		
54.66	6.00		2.62	63.18	3.00	66.18	(1)			66.18	
1.56				1.56	2.04	3.60	(1)			3.60	
3.24	1.80	2.18	1.56	8.78		8.78	(1)			8.78	
95.06	130.70	65.88	71.16	372.80	1,228.56	1,601.36	(1)		1,053.06	542.90	5.40
99.36	7.20		6.96	113.52	23.46	136.98	(1)		32.70	104.28	
16.32	27.96	39.53	60.60	144.41	131.94	276.35	(1)		276.35		
	12.00			13.06	8.40	21.46	(1)			20.40	1.06
			60.00	60.00	15.12	75.12	(1)	60.00		15.12	
11.58	4.20			15.78	22.26	38.04	(1)		22.26	15.78	
1,951.52	1,296.66	1,854.82	1,677.94	7,576.08	5,111.38	12,687.44	.003	260.00	3,168.83	6,616.53	2,642.08
36.00	36.00	21.76	6.00	99.76		99.76	(1)			99.76	
			47.88	47.88	9.48	57.36	(1)			17.88	39.48
		31.33	2.40	33.73	49.20	82.93	(1)		43.68	39.25	
		6.10	11.16	17.26	6.24	23.50	(1)		2.04	21.46	
2.40	7.20	2.90	21.00	60.48	33.00	93.48	.001	12.00	76.68	4.80	
7.22	20.62	26.88	85.20	309.58	131.46	441.04	(1)		188.46	68.04	184.54
	3.60		12.36	15.96	60.00	75.96	(1)			75.96	
26.00	2.40		8.40	46.80	25.80	72.60	(1)		2.40	66.84	3.36
24.00		16.68		40.68		40.68	(1)			40.68	
7.80	15.00		6.60	29.10	119.70	148.80	(1)	115.50		33.30	
902.07	1,790.49	1,527.34	11,742.44	10,052.34	25,960.62	42,012.96	.007	33,829.97	1,596.64	3,534.93	51.42
3,406.92	3,599.06	3,937.89	15,107.90	27,702.28	40,105.60	67,807.88	.002	33,430.28	12,320.13	13,552.56	3,504.91

¹ Pending less than 0.001 per cent.

EXHIBIT No. 21.—Statement showing distribution of property-tax collections for the years ending June 30, 1919, and June 30, 1918.

	1919	1918	Increase.	Decrease.
Tax collections:				
Current year.....	\$3,201,356.01	\$3,031,126.11	\$170,229.90	
Prior years.....	22,649.89	4,940.70	17,709.19	
Total collections.....	3,224,005.90	3,036,066.81	187,939.09	
Protested taxes collected in previous years distributed.....	98,745.89	19,102.30	79,643.59	
Total taxes distributed.....	3,322,751.79	3,055,169.11	267,582.68	
Distribution:				
Insular government—				
General purposes, 0.1 of 1 per cent.....	254,916.40	228,654.15	26,262.25	
General purposes, 0.25 of 1 per cent.....	2,410.72	370.09	2,040.63	
Bond redemption.....	252,922.59	226,408.10	26,514.49	
Sanitation purposes.....	116,749.22	112,261.24	4,487.98	
Excess over legal maxima transferred to insular revenues:				
Municipalities.....	428,151.02	319,398.58	108,752.44	
School boards.....	142,920.30	106,884.61	36,035.69	
Total.....	1,198,070.25	993,966.77	204,103.48	
Municipalities and school boards.....	2,017,207.98	1,850,370.82	166,837.16	
Protested taxes.....	107,473.56	210,831.52		\$103,357.96
Total distribution.....	3,322,751.79	3,055,169.11	267,582.68	103,357.96

EXHIBIT No. 22.—Receipts and disbursements of the insular government for the fiscal year ending June 30, 1919.

Insular revenues:			
Balance July 1, 1918.....			\$708,540.31
Receipts—			
Excess over legal municipal and school boards maxima (law No. 70 of 1918; see Exhibit No. 30).....			\$571,071.22
United States internal revenues.....			928,871.08
Customs.....			355,009.00
Internal revenues—			
Excise taxes.....		\$2,361,210.76	
Property taxes, insular proportion—			
0.1 of 1 per cent.....	\$254,916.40		
0.25 of 1 per cent.....	2,410.72		
Income taxes.....		257,327.12	
Inheritance taxes.....		802,123.80	
Proportion of municipal income for sanitation—			42,564.68
Property taxes.....	\$116,749.22		
Miscellaneous collections.....	5,745.59		
		122,494.81	
			3,565,721.17
Miscellaneous—			
Ordinary.....		655,510.78	
Municipal bonds redeemed.....		54,000.00	
School board bonds redeemed.....		60,500.00	
			770,010.78
Repayments (see Exhibit No. 26).....			1,540,222.51
Transfers from trust funds.....			145,871.86
			7,897,403.67
Total insular revenue receipts, including balance of July 1, 1918.....			8,606,008.98
Disbursements—			
Fiscal year appropriations.....		5,497,394.78	
No fiscal year appropriations.....		1,812,849.08	
Indefinite—			
Advances to municipalities.....	\$29,996.61		
Advances to school boards.....	5,000.00		
Miscellaneous.....	180,009.73		
			215,006.34
Bonds redeemed—			
Municipal.....		54,000.00	
School boards.....		60,500.00	
			114,500.00
Transfers to trust funds.....			127,872.90
			7,767,633.06
Balance June 30, 1919.....			838,365.92

Trust funds:		
Balance July 1, 1918.....		\$3,752,908.12
Receipts (see Exhibit No. 31).....	\$5,553,261.16	
Transfers from insular revenues.....	127,872.90	
		<u>5,681,134.06</u>
Total trust funds, including balance of July 1, 1918.....		9,434,042.18
Expenditures (see Exhibit No. 31).....	5,104,239.89	
Transfers to insular revenues.....	145,871.96	
		<u>5,250,111.75</u>
Balance June 30, 1919.....		4,183,930.43
Total balance, insular revenues and trust funds.....		<u>5,022,316.36</u>
Insular revenues:		
Cash.....	793,385.93	
Bonds unpledged.....	45,000.00	
		<u>838,385.93</u>
Trust funds:		
Cash.....	2,552,430.43	
Bonds pledged.....	1,631,506.00	
		<u>4,183,936.43</u>
		<u>5,022,316.36</u>

EXHIBIT No. 23.—Comparative statement of excise-stamp sales, detailed by sources, fiscal years 1916-17, 1917-18, 1918-19.

SCHEDULE A—EXCISE PROPER.

	1916-17	1917-18	1918-19
Distilled spirits:			
Domestic.....	\$952,911.46	\$209,423.21	\$147,910.77
Imported.....	22,782.43	18,280.46	16,450.61
Alcohol in medicine, cosmetics, etc.....	6,688.31	7,979.56	
Total.....	<u>982,382.20</u>	<u>232,683.23</u>	<u>164,361.38</u>
Beer:			
Domestic.....	61,006.36	50,775.53	45,996.66
Imported.....	82,346.64	34,569.64	11,853.89
Total.....	<u>143,352.00</u>	<u>85,345.17</u>	<u>57,850.55</u>
Wine:			
Imported.....	60,711.04	18,201.08	566.95
Sparkling wine.....	1,016.80	1,071.29	64.40
Total.....	<u>61,727.84</u>	<u>19,272.28</u>	<u>631.35</u>
Champagne.....	4,507.00	4,226.47	
Cigars:			
Cigars.....	346,523.73	391,396.97	304,418.12
Cigarettes.....	698,086.56	725,100.38	917,553.29
Total.....	<u>1,044,610.29</u>	<u>1,046,426.35</u>	<u>1,221,971.41</u>
Picadura and fine-cut chewing tobacco: Special stamps.....	5,634.45	4,873.74	3,729.18
Perfumery:			
Domestic.....	6,412.53	6,448.68	14,292.85
Imported.....	10,125.20	10,689.87	18,512.24
Total.....	<u>16,537.73</u>	<u>17,138.55</u>	<u>32,805.09</u>
Patent medicines:			
Domestic.....	1,967.31	3,110.60	5,051.50
Imported.....	61,769.95	62,822.86	94,004.26
Total.....	<u>63,737.26</u>	<u>65,933.46</u>	<u>99,055.76</u>
Cosmetics, lotions, toilet water, etc.:			
Domestic.....	4,434.30	5,909.47	14,477.74
Imported.....	5,074.35	5,985.99	10,472.37
Total.....	<u>9,508.65</u>	<u>11,895.46</u>	<u>24,950.11</u>
Cards:			
Cards.....	12,474.00	12,661.50	9,078.25
Arms and ammunition.....	8,465.02	9,568.87	4,401.76
Total.....	<u>20,939.02</u>	<u>22,230.37</u>	<u>14,380.01</u>
Matches: Imported.....	28,333.58	56,343.89	44,506.30
Total excise proper.....	<u>2,382,210.02</u>	<u>1,566,367.47</u>	<u>1,664,221.14</u>

EXHIBIT No. 23.—*Comparative statement of excise-stamp sales, detailed by sources, fiscal years 1916-17, 1917-18, 1918-19—Continued.*

SCHEDULE B—LICENSE TAXES.

	1916-17	1917-18	1918-19
Manufacturers:			
Distilleries.....	\$1,200.00	\$1,325.00	\$1,155.00
Rectifiers.....	11,700.00	5,700.00	.....
Perfumery.....	1,312.50	1,386.00	1,400.00
Cigars.....	4,468.75	4,086.75	3,474.39
Cigarettes.....	3,101.00	3,300.00	4,400.00
Mell-ines.....	315.00	355.00	370.00
Strippers.....	.....	3,880.00	13,880.00
Dealers.....	50.00	20.00	17,140.00
Near beer.....	100.00	100.00	100.00
Total.....	22,247.25	19,873.75	41,689.50
Wholesale dealers:			
Distilled spirits.....	15,275.00	9,857.50	775.00
Malt beverage.....	4,952.50	2,810.00	3,136.00
Beer.....	5,630.00	3,855.00	.....
Cigars.....	4,025.00	4,108.00	4,064.73
Cigarettes.....	7,612.00	7,356.00	7,544.00
Arms and ammunition.....	275.00	455.00	1,085.00
Perfumery.....	2,437.50	2,803.00	3,637.50
Denatured alcohol.....	100.00	125.00	195.00
Leaf tobacco.....	.....	6,172.50	.....
Chewing tobacco.....	.....	4,270.00	12,885.00
Cigars and cigarettes in vehicles.....	.....	25.00	100.00
Total.....	40,807.00	41,832.00	33,422.23
Retail dealers:			
Malt beverages.....	81,008.50	46,987.25	14,326.00
Cigars and cigarettes.....	65,018.25	60,663.25	63,788.25
Arms and ammunition.....	2,550.00	1,962.50	1,637.50
Perfumery.....	10,125.00	9,958.75	11,548.75
Peddlers' perfumery.....	757.50	738.75	1,051.50
Denatured alcohol.....	632.50	607.50	737.50
Total.....	160,686.75	120,906.00	93,064.50
Opium licenses.....	684.77	668.62	623.72
Gamckeepers.....	4,895.00	4,830.00	4,320.00
Physicians.....	.....	203.00	129.00
Intoxicating drinks.....	.....	506.00	1,721.00
Nonintoxicating drinks.....	.....	4,019.50	.....
Total.....	5,579.77	10,217.12	7,383.72
Total Schedule B.....	228,820.77	192,828.87	175,589.97

SCHEDULE C—DOCUMENTARY.

Notarial instruments.....	\$187,461.26	\$221,935.12	\$270,202.91
Tax certificates.....	948.00	1,369.00	1,278.50
Registrars of property.....	87,858.80	94,367.04	96,310.00
Blank books.....	268.07	1,541.51	528.39
Law pamphlets.....	44.20	171.04	70.54
Administrative fines.....	2,922.15	2,215.85	3,044.88
Stamp sales unclassified.....	453.88	.....	.....
Total Schedule C.....	279,956.16	321,599.56	371,433.43

SCHEDULE D—LUXURIES.

Motor vehicles and accessories, etc.....	.....	\$28,354.58	\$94,446.40
Phonographs.....	.....	375.83	1,406.97
Pianos and pianolas.....	.....	609.92	1,596.25
Films.....	.....	1,049.49	4,007.80
Diamonds, precious stones.....	.....	.47	981.41
Photographic cameras and accessories.....	.....	.....	2.63
Billiards.....	.....	.....	46.22
Total.....	.....	30,480.34	102,547.67
Guarantee for cigars.....	.....	28,267.25	38,220.56
Stamps for leaf tobacco.....	.....	5,362.15	33,136.60
Total.....	.....	33,599.40	71,356.06
Total Schedule D.....	.....	64,079.74	173,903.73
Protection of coffee.....	.....	.....	6,679.97
Grand total.....	\$2,890,986.95	2,144,875.64	2,301,808.23

The difference of \$30,597.47 between the total of this exhibit of \$2,391,808.23 and the amount shown in Exhibit No. 22 for excise taxes of \$2,361,210.76 is explained as follows:

Underdeposit by collector of internal revenue, Arecibo	\$78.62
Taxes paid under protest	23,971.41
Underdeposit by collector of internal revenue, Cidra .....	.01
Fund for the protection of coffee, trust fund	6,563.93
	<hr/>
Overdeposit by collector of internal revenue, Culebra	\$5.50
Overdeposit by stamp agent, Catano	11.00
	<hr/>
	16.50
	<hr/>
	30,597.47

EXHIBIT No. 24.—*Funds of the insular government June 30, 1919.*

Depositories:	
American Colonial Bank, San Juan, P. R.	\$1,550,200.61
Banco Comercial de Puerto Rico, San Juan, P. R.	318,000.00
Banco Territorial y Agrícola de Puerto Rico, San Juan, P. R.	279,000.00
Crédito y Ahorro Ponceño, Ponce, P. R.	125,000.00
The Mechanics and Metals National Bank of the City of New York, New York, N. Y.	832,877.19
The Fletcher-American National Bank of Indianapolis, Ind.	63,436.96
The Royal Bank of Canada, San Juan, P. R.	398,720.51
Banco de Ponce, Ponce, P. R.	50,000.00
National City Bank of New York, San Juan, P. R.	200,000.00
	<hr/>
Total cash in depositories	3,817,235.27
Less outstanding vouchers and pay checks drawn against funds in American Colonial Bank	975,038.08
	<hr/>
	2,842,197.19
Cash in transit to American Colonial Bank	\$261,279.17
Draft in transit drawn on the Mechanics and Metals National Bank of New York	242,340.00
	<hr/>
	503,619.17
Total available cash	<hr/>
	\$3,345,816.36
Municipal bonds:	
Collateral to part of loan of \$400,000 from the Mechanics and Metals National Bank	248,500.00
Collateral to part of \$1,225,000 refunding bonds sold	901,500.00
Unpledged	13,500.00
	<hr/>
	1,163,500.00
School board bonds:	
Collateral to part of loan of \$400,000 from the Mechanics and Metals National Bank	152,500.00
Collateral to part of \$1,225,000 refunding bonds sold	329,000.00
Unpledged	31,500.00
	<hr/>
	513,000.00
Total balance (see Exhibit No. 22)	<hr/>
	5,022,316.36
Due from municipalities on loans from insular revenues (see Exhibit No. 6)	134,849.64
Due from school boards on loans from insular revenues (see Exhibit No. 7)	799.99
Due from school boards on loans from school building fund (see Exhibit No. 8)	27,769.91
	<hr/>
	163,419.54
Bills collectible: Insular revenues	<hr/>
	27,177.24
Grand total	<hr/>
	5,212,913.14

EXHIBIT No. 25.—Statement of cash receipts and disbursements during the year ending June 30, 1919.

	Insular revenues.	Trust funds.	Total.
RECEIPTS.			
Cash balance as of July 1, 1918.....	\$708,540.31	\$3,752,908.12	\$4,461,448.43
Excess over legal municipal and school board maxima (law No. 70 of 1916).....	571,071.32		571,071.32
United States internal revenues.....	929,571.03		929,571.03
Customs.....	355,000.00		355,000.00
Excise and property taxes for municipalities and school boards.....	2,361,210.76	2,705,028.52	5,066,239.28
Industrial and commercial license taxes.....			
Property taxes, insular proportion.....	257,327.12		257,327.12
Income tax.....	802,123.80		802,123.80
Inheritance tax.....	42,564.68		42,564.68
Proportion of municipal income for sanitation.....	122,494.81		122,494.81
Court fines and fees.....	40,678.16	45,650.71	86,328.87
Harbor and dock fees.....	22,890.24	23,780.89	46,671.13
Telegraph and telephone receipts.....	109,591.26		109,591.26
Interest.....	169,012.87	2,260.80	171,273.67
Royalties on franchises.....	7,517.89		7,517.89
Taxes on insurance premiums.....	33,896.26		33,896.26
Rent of property.....	17,190.63		17,190.63
Sale of Government property.....	2,245.02		2,245.02
United States Government (Morrill-Hatch Act).....		50,000.00	50,000.00
Proceeds from sale of bonds.....		617,842.19	617,842.19
Municipal and school-board bonds redeemed.....	114,598.99		114,598.99
Miscellaneous.....	232,488.45	2,108,688.95	2,341,177.40
Bureau of supplies, printing and transportation, repayments.....	1,202,397.90		1,202,397.90
Repayments of loans by municipalities:			
Cash.....	15,946.50		15,946.50
Bonds.....	16,500.00		16,500.00
Repayments of loans by school boards:			
Cash.....	733.33		733.33
Bonds.....	30,000.00		30,000.00
Other repayments.....	274,644.78		274,644.78
Transfers.....	145,871.86	127,872.90	273,744.76
Insular government receipts.....	7,897,468.67	5,681,134.06	13,578,602.73
Total.....	8,606,008.96	9,434,012.18	18,040,021.16
DISBURSEMENTS.			
Appropriations:			
1916-17.....	8,774.07		8,774.07
1917-18.....	150,885.30		150,885.30
1918-19.....	5,337,635.41		5,337,635.41
No fiscal year.....	1,812,949.03		1,812,949.03
Indefinite.....	180,009.73		180,009.73
Relief of municipalities (loans).....	29,996.61		29,996.61
Relief of school boards (loans).....	5,000.00		5,000.00
Miscellaneous.....			
Municipal bonds redeemed.....	54,000.00		54,000.00
School-board bonds redeemed.....	60,500.00		60,500.00
Transfers.....	127,872.90	145,871.86	273,744.76
Municipalities, tax account.....		1,807,162.28	1,807,162.28
School boards, tax account.....		809,910.41	809,910.41
Insular bond redemption tax.....		84,226.29	84,226.29
Irrigation fund:			
Construction.....		3,485.81	3,485.81
Maintenance and operation.....		490,666.71	490,666.71
Development and extension of water power.....		37,233.05	37,233.05
Workman's relief trust fund.....		97,677.66	97,677.66
Road bond fund of 1916.....		374,606.45	374,606.45
Franchise deposits.....		620.88	620.88
Insular police relief fund.....		555.80	555.80
Construction of schoolhouses.....		25,663.20	25,663.20
Magazine publishing fund.....		2,218.13	2,218.13
Construction of rural school buildings.....		1,973.88	1,973.88
Teachers' pension fund.....		347.38	347.38
Funds for the protection of coffee.....		819.71	819.71
Sale of farm products.....		4,366.14	4,366.14
Special deposits.....		2,015.51	2,015.51
Outstanding liabilities.....		2,563.21	2,563.21
University fund.....		59,441.63	59,441.63
Permanent university fund.....		500.00	500.00

¹ Includes interest on irrigation fund and university agricultural fund.

² Includes proceeds sale of \$500,000 public improvement bonds of 1918 and \$117,000 irrigation bonds of 1919

EXHIBIT No. 25.—*Statement of cash receipts and disbursements during the year ending June 30, 1919—Continued.*

	Insular revenues.	Trust funds.	Total.
DISBURSEMENTS—continued.			
University agricultural fund.....		\$51,243.14	\$51,243.14
University income fund.....		1,477.23	1,477.23
Food commission fund.....		650,000.00	650,000.00
Taxes paid under protest.....		170,724.82	170,724.82
Cash bond deposits.....		3,685.58	3,685.58
Construction of harbor improvements at San Juan.....		59,070.01	59,070.01
San Juan Harbor fund.....		24,000.00	24,000.00
Wharf and harbor fund.....		14,904.53	14,904.53
Municipal bond fund.....		71,883.89	71,883.89
School-board bond funds.....		22,992.50	22,992.50
Redemption of municipal bonds.....		95,500.00	95,500.00
Redemption of school-board bonds.....		125,000.00	125,000.00
Uncollected wages.....		2,377.37	2,377.37
Miscellaneous.....		5,316.69	5,316.69
Insular government disbursements.....	7,767,623.05	5,250,111.75	13,017,734.80
Balance as of June 30, 1919.....	838,385.93	4,183,930.43	5,022,316.36
Grand total.....	8,606,008.98	9,434,042.18	18,040,051.16

EXHIBIT No. 26.—“*Repayment*” receipts, detailed, fiscal year ending June 30, 1919.

Repayments to bureau of supplies, printing, and transportation:		
By various departments from insular revenues appropriations.....	\$1,061,741.94	
By various departments from trust funds, by municipalities, school boards, and other sources.....	103,548.45	
By special disbursing officers.....	37,107.51	
		\$1,202,397.90
Payments by municipalities on account of loans.....		\$2,446.50
Payments by school boards on account of loans.....		30,738.33
Payments by pay patients, insane asylum.....		13,612.00
Amounts repaid by department of the interior for payments received from municipalities and school boards for services rendered.....		26,050.95
Amounts repaid by department of health for payments received from sale of equipment and miscellaneous material.....		440.44
Amounts repaid by department of insular police for payments received from sale of uniforms and other equipment.....		26,080.21
Amounts repaid by department of education for payments received from sale of equipment.....		14,115.28
Amounts repaid by departments to various appropriations.....		194,345.90
Total.....		1,540,223.51

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919.

[Not to be confused with expense accounts of Exhibit No. 5.]

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances, indefinite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
LEGISLATIVE.										
Executive council:										
Salaries.....	\$530.32			\$530.32				\$530.32		
Temporary employees.....	738.38			738.38				738.38		
Incidentals.....	352.93			352.93				352.48		\$0.45
Postage and freight.....	174.00			174.00				174.00		
Traveling expenses.....	8.77			8.77				8.77		
Telegraph and telephone service.....	1.33			1.33				1.33		
Stationery.....	376.21			376.21				376.21		
Inspection and testing of gas and electric meters.....	4,000.00			4,000.00				4,000.00		
Total, executive council.....	6,211.94			6,211.94				6,211.49		.45
House of delegates:										
Salaries.....	410.00			410.00				410.00		
Legislative printing.....	121.84			121.84				121.84		
Incidentals.....	368.42			368.42		\$60.00		199.04		119.38
Library supplies.....	57.01			57.01				57.01		
Mileage for members.....	75.40			75.40				75.40		
Total, house of delegates.....	1,032.67			1,032.67		50.00		863.29		119.38
Senate of Porto Rico:										
Salaries.....	1,046.22	27,530.00		28,576.22		27,259.91			27,259.91	1,316.31
Furniture, books, and library equipment.....	1,294.76	1,500.00		2,794.76		1,645.07			1,645.07	1,149.69
Legislative printing.....	1,996.17	1,800.00		3,796.17		1,575.54			1,575.54	3,220.63
Incidentals.....	3,055.88	4,000.00		7,055.88		4,543.02	\$300.00		4,843.02	2,212.86
Compensation to members when in special session.....	4.00	3,880.00		3,884.00		1,280.00			1,280.00	2,604.00
Mileage for members.....	4.20	880.00		884.20		1,425.20	15.00		1,440.20	2,444.00
Printing of senate journal.....	1,000.00	1,700.00	\$300.00	3,000.00		1,188.95			1,188.95	1,811.05
Purchase of books for library.....	500.00			500.00						500.00
Temporary employees.....		1,950.00	15.00	1,965.00		1,953.56			1,953.56	11.44
Total, senate of Porto Rico.....	8,901.23	43,220.00	315.00	52,436.23		38,851.25	315.00		39,166.25	13,269.98

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operation affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Re payments and transfers from other appropriations.	Total credits.	Debit bal- ances in- definite appropriations, July 1, 1918.	Cash dis- bursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
<i>Executive secretary—Continued.</i>										
Bureau of supplies, printing, and transportation:										
Salaries.....	\$32.47	\$27,180.00	.....	\$27,212.47	.....	\$25,729.99	\$1,450.31	\$14.24	\$27,194.24	\$18.23
Contingent expenses.....	430.20	5,000.00	.....	5,210.51	.....	7,946.84	50,000.00	107.07	8,053.91	1,156.60
Working capital fund.....	4,121.56	.....	1,357,397.90	1,341,519.46	.....	1,290,726.00	.....	.....	1,340,726.00	793.46
Total.....	4,584.23	32,180.00	1,341,178.21	1,377,942.44	.....	1,324,402.53	51,450.31	121.31	1,375,974.15	1,968.29
Total executive secretary.....	7,756.19	84,990.00	1,344,130.13	1,436,876.82	.....	1,376,477.24	54,899.02	84.025	1,431,734.53	5,140.29
<i>Public-service commission.</i>										
Salaries.....	66.02	99,520.00	.....	10,486.02	.....	7,854.17	.....	.....	7,854.17	2,431.85
Incidentals.....	7.16	1,000.00	.....	1,007.16	.....	773.09	.....	.....	780.25	223.91
Miscellaneous expenses.....	46.75	6,000.00	.....	6,046.75	.....	4,335.70	.....	7.16	4,335.70	1,711.05
Total public-service commission.....	1,019.93	16,520.00	.....	17,539.93	.....	12,962.96	.....	7.16	12,970.12	4,569.81
<i>Attorney general.</i>										
Office of the attorney general:										
Salaries.....	922.98	52,110.00	.....	53,032.98	.....	46,164.77	6,750.00	.....	51,914.77	1,118.21
Incidentals.....	2,002.58	2,500.00	375.00	4,877.58	.....	4,335.16	.....	315.34	4,650.50	227.08
Litigation fund.....	923.35	1,000.00	3,567.35	5,490.70	.....	4,705.96	.....	508.40	5,214.36	276.34
Postage.....	4.00	1,400.00	.....	404.00	.....	400.00	.....	.....	400.00	4.00
Traveling expenses.....	282.38	1,300.00	870.30	2,452.68	.....	2,174.98	.....	21.69	2,196.67	256.11
Total, Office of the Attorney Gen- eral.....	4,135.29	57,310.00	4,812.65	66,257.94	.....	56,780.87	6,750.00	845.33	64,376.20	1,881.74
<i>Penal institutions:</i>										
Reform school—										
Salaries.....	162.01	15,740.00	.....	15,902.01	.....	14,049.56	1,714.00	96.50	15,940.06	49.56
Subsistence.....	2,579.73	16,592.00	.....	20,013.19	.....	14,729.63	1,100.00	850.40	16,680.03	3,333.16
Equipment.....	2,982.20	2,600.00	841.46	6,424.66	.....	7,544.83	.....	120.98	7,665.81	968.19
Lighting, power, and water.....	337.75	800.00	963.00	1,892.75	.....	1,716.51	.....	40.15	1,756.66	70.19
Telegraph and telephone.....	7.33	75.00	.....	82.33	.....	28.32	.....	5.78	34.30	48.24

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in- definite appropriations, July 1, 1918.	Cash dis- bursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
<i>Attorney general—Continued.</i>										
<i>Penal institutions—Continued.</i>										
Ponce jail:										
Salaries.....	\$65.46	\$7,020.00	.....	\$7,085.46	.....	\$6,620.16	\$317.00	\$64.86	\$7,011.02	\$74.44
Food for prisoners.....	1,019.65	21,924.00	\$2,769.80	28,723.45	.....	19,576.75	400.00	103.92	20,080.67	5,642.78
Lighting and water.....	213.00	270.00	270.00	1,123.00	.....	907.37	.....	95.58	1,002.95	130.05
Telegraph and telephone.....	39.74	25.00	10.00	74.74	.....	27.89	.....	18.43	46.21	28.73
Postage and freight.....	58.53	50.00	100.00	208.53	.....	117.57	.....	27.62	145.19	61.36
Incidentals.....	199.43	500.00	8,485.00	9,184.43	.....	8,408.52	.....	123.52	8,532.04	622.39
Total.....	1,593.83	30,179.00	11,604.80	43,377.63	.....	35,666.96	717.00	433.92	36,817.88	6,559.75
<i>Mayaguez jail:</i>										
Salaries.....	61.66	6,420.00	.....	6,481.66	.....	5,984.67	490.00	5.66	6,450.33	31.33
Food for prisoners.....	2,114.92	8,344.00	542.04	11,000.96	.....	7,751.31	5,848.69	595.76	10,195.76	895.20
Lighting and water.....	194.28	600.00	.....	794.28	.....	201.70	324.00	94.63	620.33	173.95
Telegraph and telephone.....	77.74	25.00	.....	102.74	.....	22.58	.....	61.16	83.74	19.00
Postage and freight.....	19.63	37.00	145.00	201.61	.....	174.23	.....	2.71	176.94	24.69
Incidentals.....	360.35	600.00	3,300.00	4,260.35	.....	3,887.75	.....	190.73	4,078.48	181.90
Total.....	2,828.61	16,026.00	3,987.04	22,841.65	.....	14,022.24	6,632.69	950.65	21,605.58	1,236.07
<i>Humacao jail:</i>										
Salaries.....	203.16	6,240.00	.....	6,443.16	.....	5,987.98	300.00	96.35	6,384.33	58.83
Food for prisoners.....	608.24	10,890.00	853.65	12,360.89	.....	7,615.09	3,420.00	127.54	11,162.63	1,198.26
Lighting and water.....	195.17	600.00	210.00	1,005.17	.....	777.89	.....	164.12	942.01	63.16
Telegraph and telephone.....	29.09	75.00	.....	85.09	.....	46.07	.....	12.24	78.31	16.78
Postage and freight.....	10.49	40.00	30.00	80.49	.....	48.36	.....	2.13	50.48	30.01
Incidentals.....	187.17	600.00	430.00	1,217.17	.....	968.40	.....	20.23	988.63	228.54
Total.....	1,224.32	18,454.00	1,523.65	21,201.97	.....	15,463.78	3,720.00	422.61	19,606.39	1,595.58
<i>Guayama jail:</i>										
Salaries.....	77.09	5,400.00	.....	5,479.43	.....	4,984.67	368.00	70.93	5,423.60	55.83
Food for prisoners.....	1,015.17	8,833.00	2.34	10,448.17	.....	5,248.07	4,182.50	164.82	9,595.39	852.78
Lighting and water.....	18.06	340.00	140.00	498.06	.....	457.23	.....	9.59	466.82	31.24
Telegraph and telephone.....	23.84	70.00	.....	93.84	.....	59.05	.....	12.48	71.53	22.31
Postage and freight.....	33.73	40.00	.....	73.73	.....	34.87	.....	16.04	50.91	22.82

Incidentals.....	329.44	510.00	945.00	1,134.44	751.65	4,550.40	170.26	921.78	212.00
Total.....	2,450.33	14,890.00	384.84	17,727.67	11,839.44	4,550.40	444.00	10,810.03	1,197.84
Aguadilla Jail:									
Salaries.....	90.49	4,800.00		4,950.49	4,540.26	374.00	16.00	4,970.26	20.23
Food for prisoners.....	1,468.03	5,399.00		6,864.27	3,016.11	2,342.00	855.80	5,712.91	1,141.36
Rent.....		720.00	17.24	720.00	437.00	228.00		665.00	55.00
Lighting and water.....	269.55	800.00		569.55	62.87	150.00	214.21	427.08	142.47
Telegraph and telephone.....	39.23	25.00		64.23	10.08		20.28	30.37	33.86
Postage and freight.....	13.68	30.00	15.00	58.68	42.76		8.18	50.94	7.74
Incidentals.....	206.46	375.00	400.00	984.46	725.55		98.31	820.86	163.60
Total.....	2,090.44	11,679.00	432.24	14,201.68	8,833.63	3,094.00	709.79	12,637.42	1,564.26
Miscellaneous:									
Women and children wards:									
Salaries.....	140.00	700.00	850.00	140.00	1,488.28		9.85	1,498.13	140.00
Transportation of prisoners.....	172.04			1,723.04	9,326.44			9,326.44	6,116.06
Maintenance of prisoners in municipal jails.....		15,443.10		15,443.10	130.00			130.00	
Reimbursement to Ramon Lobos for house rent.....		130.00		130.00					
Total.....	313.04	16,273.10	850.00	17,436.14	10,944.72		9.85	10,954.57	6,481.57
Total, penal institutions.....	28,270.62	273,914.10	64,292.36	366,437.08	274,089.25	31,953.64	7,210.19	313,256.08	53,181.00
Total, attorney general.....	32,405.91	331,224.10	69,065.01	432,695.02	330,870.12	38,706.64	8,055.52	377,632.28	55,062.74
Treasurer:									
Salaries.....	230.42	137,940.00	2,147.27	140,217.69	139,936.05	230.42		140,166.47	51.22
Stationery and printing.....	1,754.43	8,436.15	3,024.16	13,216.74	10,965.49		1,348.77	12,344.26	872.48
Lighting and water.....	20.03	100.00		120.03	102.08		8.33	110.41	9.62
Telegraph and telephone.....	76.78	800.00	1,368.08	2,244.86	1,735.89		70.63	1,806.52	438.24
Incidentals.....	982.98	7,000.00	4,698.35	12,581.33	9,400.31		927.14	10,327.45	2,253.88
Postage and freight.....	57.75	4,500.00	2,001.77	6,559.52	5,864.57		2.31	5,970.73	2,588.79
Traveling expenses, internal-revenue agents.....	29.41	8,315.00	2,043.85	10,398.26	9,311.80	1,000.00		10,311.80	77.46
Care of horses, internal-revenue agents.....	589.25	7,200.00		7,789.25	5,888.30	1,949.25		7,737.55	1.70
Automobile repairs.....	102.89	250.00		352.89	362.89			362.89	
New engraving plates and printing.....	189.96	10,000.00	825.00	10,714.96	9,093.84	1,500.00		10,593.84	121.12
Cigar guaranty stamps.....	3,980.39	4,000.00		7,980.39	1,746.80	4,525.00		6,271.80	2,708.69
Traveling expenses, assessors.....	355.49	4,200.00	400.00	4,955.49	3,944.78	983.42		4,940.20	15.49
Care of horses, assessors.....	218.50	2,000.00		2,718.50	2,237.00	481.50		2,718.50	
Traveling expenses.....		1,000.00		1,000.00	947.18	62.82		1,000.00	
Salaries, collectors of internal revenue.....	1,029.57	74,200.00		75,229.57	71,574.40	3,567.14		75,171.54	58.33
Levying additional taxes on income of the fiscal year:									
1917-18.....	8,000.00	8,000.00		8,000.00	7,799.99		8,000.00	7,799.99	200.01
1918-19.....				8,000.00				8,000.00	

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Pases.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
Treasurer—Continued.										
Inspection of Porto Rican tobacco.....	\$2,386.72			\$2,386.72		\$1,184.17			\$1,184.17	\$1,182.55
Expenses, sale of bonds for roads.....	10,000.00			10,000.00						10,000.00
Premiums on bonds of employees of the insular government.....		\$5,000.00	\$86.19	5,086.19		4,983.39		\$86.19	5,074.58	41.61
Proportion of revenue derived from the registration of conditional sales to be paid to municipalities.....		683.49		683.49		183.49			183.49	500.00
Settlement of claims for overcollection of rentals.....	39.41			39.41						39.41
Total.....	30,026.48	235,035.64	16,174.67	331,236.79		286,854.53	\$14,798.29	10,423.37	312,076.19	19,160.60
Miscellaneous:										
Repayment of taxes improperly collected.....		10,477.95		10,477.95		7,687.99			7,687.99	2,789.96
Public improvement bonds of 1914.....		40,000.00		40,000.00		40,000.00			40,000.00	
Interest, public improvement bonds.....		11,166.65	8,833.35	20,000.00		20,000.00			20,000.00	
Compensation to stamp agents.....		771.59		771.59		771.59			771.59	
Bonds for road and bridge construction.....		20,000.00		20,000.00		20,000.00			20,000.00	
Municipal refunding bonds.....		50,200.00		50,200.00		49,000.00			49,000.00	1,200.00
Principal refunding bonds.....		51,000.00		51,000.00		51,000.00			51,000.00	
Refunding bonds.....	8,673.60			8,673.60				8,673.60	8,673.60	
Collateral loan (principal).....		116,600.00	230.55	116,830.55		116,830.55			116,830.55	
Reimbursements to municipalities for influenza expenditures.....		25,000.00	41.90	25,041.90		22,228.93			22,228.93	2,812.97
Total.....	8,673.60	325,216.19	9,105.80	342,995.59		327,519.06		8,673.60	336,192.66	6,802.93
Total, treasurer.....	38,700.08	610,251.83	25,280.47	674,232.38		614,373.59	14,798.29	19,096.97	648,268.85	25,963.53
Auditor.										
Salaries.....	8,683.30	78,920.00		87,613.30		75,724.59	1,600.00	2,200.11	79,524.70	8,088.60
Stationery and printing.....	816.58	1,000.00	986.69	2,783.27		1,846.28	300.00	47.20	2,196.48	586.79
Telephone and telegraph.....	50.78	100.00		150.78		52.12		7.01	59.13	91.65

Traveling expenses.....	1,403.66	5,000.00	0,900.60	4,533.50	1922.01	6,525.07	1,380.09
Postage and freight.....	3.76	500.00	506.76	461.97	133.14	461.97	41.79
Incidentals.....	608.89	1,000.00	2,799.86	2,135.16		2,208.50	641.86
Total, auditor.....	12,170.06	88,520.00	2,086.69	100,756.75	3,879.47	90,026.15	10,730.60
<i>Department of the Interior.</i>							
Office of the commissioner:							
Salaries.....	67.09	98,940.00	57.50	99,084.59	67.09	98,984.30	80.39
Incidentals.....	584.86	5,500.00	6,096.12	12,482.99		11,081.70	511.39
Traveling expenses.....	417.77	3,500.00	750.00	5,687.77	70.72	5,926.16	406.71
Purchase of automobile plates.....		2,000.00	173.92	2,473.92		2,473.92	
Postage and freight.....	64.35	2,000.00	100.00	2,164.35			54.65
Unexpended property.....	111.00	2,000.00	1,350.00	3,461.00			782.98
Telegraph and telephone.....	368.06	500.00		866.06		2,775.08	132.37
Blank books and printing.....	357.29	3,500.00	500.00	4,357.29		4,134.30	223.09
Automobile expenses.....	289.90	1,500.00	2,244.57	4,004.77		3,439.91	564.86
Compensation to pilots acting as captains of ports.....	410.09	1,500.00	.55	1,910.64		1,125.55	785.09
Expenses, division of public lands.....	56.20			56.20		22.56	33.64
Total.....	2,667.44	120,940.00	11,882.97	135,520.41	502.20	131,976.44	3,543.97
<i>Maintenance and repair of public buildings and improvements:</i>							
Maintenance, repair, and reconstruction of public buildings.....	2,427.69	59,000.00	40,806.05	102,233.74		98,535.39	3,398.35
Maintenance, repair, construction of buildings, and improvement of public lands, College of Agriculture and Mechanic Arts, Mayaguez.....	816.69	5,000.00	212.08	5,213.08		4,706.65	506.43
Miscellaneous repairs.....			697.33	1,424.02		1,424.02	
Funds for the repairs of school building at Corozal.....	160.46			180.46		160.46	
Alteration, repair, and construction of reform school buildings.....	7,294.71			7,294.71		7,294.71	
Construction of model penitentiary.....	117,508.89			117,508.89			117,508.89
Erection of an insular capital building.....	287,161.46			287,161.46			287,161.46
Construction of a district jail at Aguadilla.....	20,000.00			20,000.00			20,000.00
Construction of an insular building in the city of Mayaguez.....	50,000.00			50,000.00			50,000.00
Construction of a pier in the city of Aguadilla.....	12,000.00			12,000.00			12,000.00
Construction of addition to building at experimental station, Rio Piedras.....	14,000.00			14,000.00		86.53	13,913.47
Rural school building fund.....	97,900.00			97,900.00			97,900.00
Construction of rural school building in Caba.....	1,000.00			1,000.00			1,000.00

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operation affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
Department of the Interior—Continued.										
Maintenance and repair of public buildings and improvements—Continued.										
Construction of rural school building in Luquillo.....	\$1,100.00			\$1,100.00			\$1,100.00		\$1,100.00	
Construction of dormitories, girls' and boys' charity schools.....	19,401.00	\$30,000.00		49,401.00		\$14,755.96			44,755.96	\$4,645.04
Water for public buildings.....	628.01	1,000.00	\$180.00	1,808.01		1,122.37		\$490.16	1,612.53	195.48
Electric light for public buildings.....	296.20	2,000.00	920.00	3,216.20		3,082.99		1.59	3,084.58	131.62
Repairs to Institute of Tropical Medicine Building.....	1,084.25			1,084.25		486.13			486.13	598.12
Allen Street No. 2.....	6.43			6.43			\$5.43		6.43	
Allen Street No. 3.....	37.08			37.08			37.08		37.08	
Boys' charity school.....	352.85			352.85			148.95	203.90	352.85	
Diputación building.....	56.45			56.45			56.45		56.45	
Girls' charity school.....	121.68			121.68			121.68		121.68	
Leper colony, Goat Island.....	72.65			72.65			72.65		72.65	
Intendencia building.....	14.35			14.35			14.35		14.35	
Insane asylum.....	45.19			45.19		16.00	29.19		45.19	
Naval station.....	35.05			35.05			35.05		35.05	
Penitentiary.....	29.10			29.10			29.10		29.10	
San Francisco No. 60 police barracks.....	18.48			18.48			18.48		18.48	
Humacao public building.....	51.71			51.71		27.69	24.02		51.71	
Police barracks, Subornero.....	27			27			50		50	
Captain of the port building, Ponce.....	7.33			7.33			7.33		7.33	
Ponce hind asylum.....	68.50			68.50			68.50		68.50	
Callebra public building and jail.....	18.19			18.19			18.19		18.19	
Arcebo district court.....	1.63			1.63			1.63		1.63	
Arcebo district jail.....	39.08			39.08			39.08		39.08	
Public works storehouse, Marina.....	.50			.50			.50		.50	
Insular fair grounds.....	.86			.86			.86		.86	
Captain of the port building, Mayaguez.....	72			72			72		72	
University of Porto Rico, Mayaguez.....	81.72			81.72			81.72		81.72	

	20	21	22	23	24	25	26	27	28	29	30	31	32
Caracas public building, improving the sewerage system of the district and maintaining the school buildings in Narar-jito.....	300.50	300.50	300.50	300.50	300.50	300.50	300.50	300.50	300.50	300.50	300.50	300.50	300.50
Repairs to school buildings in Narar-jito.....	338.08	338.08	338.08	338.08	338.08	338.08	338.08	338.08	338.08	338.08	338.08	338.08	338.08
Total.....	638,547.10	97,000.00	42,728.46	774,274.36	150,527.26	13,213.28	1,574.90	105,315.50	608,763.86				
Donation for construction of educational buildings (exclusive of University of Porto Rico):													
Construction of high school building in Mayaguez.....	428.14			428.14	200.00		238.14	428.14					
Construction of high schools, San Juan.....	65,741.21			65,741.21	130.00			130.00					65,611.21
Construction of school building at Morovis.....	19,944.74			19,944.74	606.36			606.36					19,338.38
Construction of school building in Jayuya and Guaynabo.....	25,000.00			25,000.00									25,000.00
Total.....	111,114.09			111,114.09	936.36		238.14	1,164.50					109,949.59
Maintenance and repair of public roads and bridges:													
Construction, maintenance, and repair of public roads and bridges.....	22,916.34	650,000.00	63,807.55	738,723.99	672,384.62	50,021.71		722,406.33					14,317.66
Construction of Martin Peda-Bayamon Road.....	389.43			389.43			389.43	389.43					
Construction of San Antonio-Martin Peda Road.....	56,470.54		2.25	56,472.79	17,576.50			17,576.50					38,896.29
Construction of San Sebastian-Las Marias Road.....	18,294.97		468.88	18,691.85	11,071.87			11,071.87					7,019.98
Construction of Corozal-Morovis Road.....	15,680.82		801.11	16,481.93	15,357.63			15,357.63					1,124.30
Construction of Camuy-San Sebastian Road.....	27,629.52			27,629.52									27,629.52
Construction of road No. 16 from Yauco to road No. 14.....	5,026.43			5,026.43	5,026.43			5,026.43					
Construction of road from kilometer 3, Bayamon-Comerio Road, to Toa Alta.....	8,863.77		3,688.86	11,952.63	10,439.78	102.91		10,542.59					1,410.04
Construction of five bridges as designated on Ponce-Guayama Road.....	54,987.66			54,987.66	31,063.27			31,063.27					23,924.39
Completion of Las Piedras-San Lorenzo and Naguabo-Juncos Road.....	178.08			178.08				178.08					
Termination of road in Vieques.....	4.50			4.50	3.30			1.20					4.50
Study of road from Barros to Coamo.....	6,459.04			6,459.04									6,459.04
Purchase and repair of machinery.....	1.24			1.24	20.25			1.24					
Stone, labor, fuel, etc.....	24.86			24.86				24.86					
Total.....	216,857.20	650,000.00	68,166.75	935,023.95	762,943.65	50,124.52	574.56	813,642.73					121,381.22

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
<i>Department of the Interior—Continued.</i>										
Maintenance and repair of harbor improvements:										
Repairs, maintenance, and construction of certain docks, bulkheads, and water fronts.....	\$342.70			\$342.70						\$342.70
Repairing bulkhead and sea wall in San Juan Harbor.....	1,199.47		\$226.42	1,415.89		\$939.15		\$209.22	\$839.15	476.74
Repairs to landing wharf at Cataño.....	209.22			209.22					209.22	
Total.....	1,741.39		226.42	1,967.81		939.15		209.22	1,148.37	819.44
Miscellaneous:										
Construction of artesian well at Playa Naguabo.....	700.00			700.00						700.00
Maintenance of aqueducts at Quebradillas and Isabela.....	56.47			56.47		56.47			56.47	
Plans for construction of public service railroads.....	1,357.69			1,357.69		761.41			761.41	596.28
Survey, sale, or lease of certain government lands at Boqueron, Cabo Rojo.....	362.60			362.60		78.47			78.47	284.13
Survey and sale of certain government lands.....	1,241.46			1,241.46		287.96			287.96	953.50
Study of irrigation at Lajas and Isabela.....	32.78			32.78		15.51			15.51	17.27
Changing course of Yaurol River at Arroyo.....	127.47			127.47				127.47	127.47	
Construction of aqueduct in Juana Diaz.....	10,000.00			10,000.00						10,000.00
Acquisition of land and construction of insane asylum building.....	300,000.00			300,000.00						300,000.00
Paving and maintaining Ponce de Leon Avenue.....	100,000.00			100,000.00						100,000.00
Promote the cultivation of new crops and the forest resource.....	5,000.00		2,561.28	7,561.28		3,410.90			3,410.90	4,150.38

Special construction work for municipal hospital fund for the construction of hospital in Cabo Rojo.	2,121.53	24,071.80	28,193.33	24,011.74	24,011.74	3,581.59
Earthquake relief fund:	2,000.00		2,000.00			2,000.00
Repair and partial reconstruction of the buildings, Arecibo district court.	\$10,000.00	391.00	10,391.00	\$799.78		7,905.85
Repair to the reform school building.	5,000.00	445.32	5,445.32	1,639.78		3,805.54
Repairs and reconstruction of the building for the College of Agriculture and Mechanic Arts, Mayaguez.	15,000.00		15,000.00			15,000.00
Repairs to the Ponce district court building.	25,000.00	670.01	25,670.01	1,620.09	778.30	23,271.62
Repairs to the building of the blind asylum at Ponce.	10,000.00	606.28	10,606.28	1,325.54	788.63	8,492.11
Repairs to the building for the office of the captain of the port in Ponce.	2,000.00	23.01	2,023.01	781.56	64.35	1,177.10
Repairs to the building for the girls' charity school in San Felipe.	20,000.00	143.74	20,143.74	3,928.07	7,908.84	8,306.83
Repairs to the building for the boys' charity school, Santurce.	5,000.00	5,133.05	10,133.05	4,702.03	188.37	5,242.65
Repairs of Caminero houses at not to exceed \$300 each.	6,000.00	245.80	6,245.80	1,039.01		5,226.79
Repairing bridges and culverts.	25,000.00	440.27	25,440.27	856.38		\$4,583.89
Aiding the municipality of Aguadilla in the reconstruction and repair of municipal buildings.	30,000.00		30,000.00			30,000.00
Aiding the municipality of Aguada in the reconstruction and repair of municipal buildings.	5,000.00		5,000.00	.13		4,999.87
Aiding the municipality of Añasco in the reconstruction and repair of municipal buildings.	15,000.00		15,000.00			15,000.00
Aiding the municipality of Isabela in the reconstruction and repair of municipal buildings.	5,000.00		5,000.00			5,000.00
Aiding the municipality of Mayaguez in the reconstruction and repair of municipal buildings.	60,000.00		60,000.00			60,000.00
Relief of Josefa Alvarez, widow of Irizarry, for the death of her daughter, Emilia Irizarry.	1,500.00		1,500.00			1,500.00

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropri- ations effec- tive since July 1, 1918.	Repayments and transfers from other appropri- ations.	Total credits.	Debit bal- ances in- definite appropri- ations, July 1, 1918.	Cash dis- bursements.	Transfers to other appropri- ations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
<i>Department of the Interior—Continued.</i>										
Miscellaneous—Continued.										
Earthquake relief fund—Continued.										
School board of Aguadilla for re- pair of Lafayette School build- ing.....		\$800.00	\$42.10	\$842.10		\$539.22			\$539.22	\$302.88
School board of Aguadilla for the reconstruction of a 6-room schoolhouse.....		18,000.00		18,000.00						18,000.00
School board of Anasco for re- pairs of the Ramirez de Are- llano and De Hostos School buildings, at \$2,000 each.....		4,000.00	94.58	4,094.58		380.06			380.06	3,734.52
School board of Mayaguez for the reconstruction of an 8-room school building.....		24,000.00		24,000.00						24,000.00
School board of Moca for the re- pair of M. Quiñones School building.....		6,500.00		6,500.00		21.28			21.28	6,478.72
School board of San German, for the repair and reconstruction of Antonia Martinez school building.....		6,000.00		6,000.00		41.34			41.34	5,958.66
School board of San German, for the construction of a six-room school building.....		18,000.00		18,000.00						18,000.00
School board of San Sebastian, for the repair and reconstruc- tion of Whittier school building.		2,500.00		2,500.00		22.90			22.90	2,477.10
School board of San Sebastian, for construction of a four-room school building.....		12,000.00		12,000.00						12,000.00
School board of Lares, for the re- pair of the Clay school build- ing.....		2,500.00		2,500.00		25.09			25.09	2,474.91

[illegible]

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operation affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
<i>Department of education—Continued.</i>										
Public schools:										
Salaries, common schools.....	\$24,754.96	\$1,471,600.00	\$2,069.44	\$1,496,444.43		\$1,379,394.38	\$5,785.29	\$2,783.14	\$1,387,972.81	\$110,471.62
Contingent expenses, common schools.....	918.78	6,000.00	1,500.00	8,418.78		7,415.67	25,000.00	8.34	7,424.01	991.77
Textbooks and school supplies.....	6,082.59	75,000.00	23,396.72	106,479.31		74,603.34	109.72		99,603.24	6,876.07
Salaries, high schools.....	6,341.90	90,000.00	8,390.00	104,731.90		91,530.26		832.57	92,462.55	12,269.35
Contingent expenses, high schools.....	70.28	15,000.00	1,236.05	16,306.33		8,101.96			8,101.96	8,201.37
Summer schools and institutes.....	86.17	2,000.00		2,086.17		1,046.30		.15	1,046.45	139.72
Common-school equipment.....	10,384.85		13,970.78	24,355.63		6,004.64			6,004.64	18,290.99
Extension and development of common and industrial schools.....	1,332.13		771.47	2,103.60						2,103.60
Equipment for high schools.....	771.47			771.47			771.47		771.47	
Rent, equipment, and supplies for rural schools.....		7,000.00	424.12	7,424.12		7,416.12			7,416.12	8.00
Night schools.....		5,000.00		5,000.00		4,618.00			4,618.00	382.00
Total.....	50,743.16	1,671,600.00	53,778.58	1,776,121.74		1,581,090.57	31,676.48	3,614.20	1,616,381.25	159,740.49
Miscellaneous:										
Technical education of Porto Rican students in the United States.....	250.00			250.00				250.00	250.00	
Magazine publishing fund.....	115.17		2,125.51	2,240.68		2,240.68			2,240.68	
Total.....	365.17		2,125.51	2,490.68		2,240.68		250.00	2,490.68	
University of Porto Rico: Expenses, University of Porto Rico.....	500.01	49,921.00	1,471.77	51,892.78		51,365.95	524.81		51,890.76	2.02
Total, department of education.....	58,171.94	1,776,261.00	59,393.73	1,893,846.67		1,688,409.95	32,201.29	4,977.03	1,725,588.27	169,268.40
<i>Carnegie library.</i>										
Salaries.....	715.99	7,500.00		8,215.99		5,786.66	618.74	243.34	6,648.74	1,690.85
Incidentals.....	8,243.40	8,000.00	761.71	17,010.11		9,509.24		434.03	9,943.27	7,066.84
Total, Carnegie library.....	8,959.39	15,500.00	761.71	25,221.10		15,295.90	618.74	677.37	16,592.01	8,663.69

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
Department of agriculture and labor—Con.										
Continued.										
Experimental station and field force—										
Supplies.....	\$835.58	\$1,500.00	\$2,565.00	\$4,000.58		\$3,926.05		\$73.44	\$3,926.05	\$974.53
Postage and freight.....	100.86	400.00	37.00	620.86		535.36		608.80	608.80	12.06
Telegraph and telephone.....	68.90	150.00	37.00	255.90		175.63		38.39	214.51	36.39
Lighting and water.....	85.02	150.00		235.02		101.55		66.58	168.43	66.59
Motorcycle supplies.....	142.26	100.00		242.26		60.96	\$50.00	138.86	188.86	53.40
Maintenance of buildings.....	4.05	300.00		304.05				1.76	60.96	243.09
Construction of plant house.....	1.76			1.76					1.76	
Total.....	3,080.44	38,940.00	7,071.92	49,092.36		36,502.59	6,252.38	909.91	43,664.88	5,427.48
Miscellaneous:										
Board of commissioners of agriculture.	336.65			336.65				336.65	336.65	
Insular forest fund.....		6,000.00		6,000.00		2,570.54			2,570.54	3,429.46
Total.....	336.65	6,000.00		6,336.65		2,570.54		336.65	2,907.19	3,429.46
Total, department of agriculture and labor.....	19,181.66	102,630.00	16,092.37	137,904.03		95,092.01	14,707.38	12,745.91	122,545.30	15,358.73
Insular police.										
Salaries.....	6,492.53	436,140.00	303.49	442,936.02		427,183.70	5,892.74	3,815.43	436,991.87	6,044.15
Stationery and printing.....	44.11	2,500.00	1,363.55	3,807.66		3,841.27		2.06	3,843.33	64.33
Lighting and water.....	469.71	2,800.00	125.00	3,294.71		3,920.49		365.01	4,256.41	96.30
Telegraph and telephone.....	138.14	3,000.00	211.01	3,249.15		3,144.11		88.60	3,232.71	16.44
Rent of quarters.....	14.48	14,000.00	591.00	14,705.48		14,581.80			14,581.80	93.68
Transportation.....	1,547.82	8,000.00	1,064.50	10,612.32		9,243.39	809.38	1,000.73	10,553.50	48.32
Care of animals.....	165.23	8,000.00	85.36	8,250.59		6,370.06	1,000.00	1,422.99	7,513.05	737.54
Automobile supplies and repairs.....	101.97	6,000.00	4,164.07	9,266.04		8,574.04			8,574.04	692.00
Unexpendable property.....	1,282.19	2,000.00	1,960.00	5,232.19		3,604.32		1.33	3,605.65	1,626.54
Postage and freight.....	.88	800.00	598.25	1,399.13		1,425.48			1,426.13	13.65
Secret and confidential services.....	380.60	1,400.00		1,880.60		1,500.00		328.97	1,528.97	351.63
Incidentals.....	112.24	2,000.00	2,323.50	4,435.74		4,268.74	79.86	2.25	4,377.85	57.89

Special guardsmen for elections.....	8,004.33	10,000.00	4.46	8,004.33	7,044.70	2,931.00	7,197.00	9,001.70	2.47
Pay for remounts.....	400.80	2,000.00	.....	400.80	7,044.70	1,300.00	.....	9,001.70	638.04
Bicycle repairs and supplies.....	.....	.....	.....	.....	398.26	.....	.....	9,001.70	340.74
Insular police uniform fund.....	1,501.43	.....	26,163.53	27,665.00	27,500.77	.....	.....	27,500.77	103.19
Compensation for the life of members of the insular police.....	.....	2,000.00	.....	2,000.00	2,000.00	.....	.....	2,000.00	.....
Total, insular police.....	20,645.46	500,790.00	38,886.72	560,322.18	524,651.04	11,408.74	13,744.22	549,802.00	10,520.18
Department of health.									
Office of the commissioner:									
Salaries.....	1,753.19	77,700.00	.....	79,453.19	75,215.26	2,539.00	267.36	78,071.62	1,381.57
Auto supplies and repairs.....	227.40	.....	.....	227.40	.....	400.00	94.40	557.96	227.40
Chemicals and disinfectants.....	696.73	500.00	.....	1,186.73	63.66	.....	.....	1,186.73	628.77
Killing and burying animals.....	.....	180.00	.....	180.00	7.80	100.00	.....	107.50	42.60
Lighting and water.....	111.63	800.00	.....	911.63	572.57	200.00	16.76	783.33	133.20
Postage and freight.....	1,376.29	2,500.00	300.00	4,176.29	2,864.03	71.88	49.33	2,985.24	1,191.05
Purchase of vaccine, virus, and serums.....	1,286.48	1,000.00	16.25	2,302.73	397.00	565.00	394.64	1,356.64	946.09
Stationery, printing, and publication of medical bulletin.....	962.47	1,500.00	2,735.01	5,197.48	4,514.64	.....	33.63	4,548.27	649.21
Unexpended property.....	441.58	.....	.....	941.58	560.40	.....	66.31	628.71	314.87
Supplies and equipment, bacteriological laboratory.....	686.27	2,500.00	12.44	3,201.71	1,465.98	830.00	14.88	2,310.86	890.85
Supplies and equipment, chemical laboratory.....	1,010.46	2,000.00	636.00	3,646.46	3,213.05	.....	40.18	3,253.23	393.23
Telegraph and telephone.....	1,158.95	1,200.00	.....	2,358.95	890.99	410.00	262.16	1,593.15	763.80
Traveling expenses.....	1,005.28	12,000.00	6,700.00	19,705.28	18,253.85	.....	50.65	18,304.50	1,400.78
Incidentals.....	2,920.71	1,000.00	2,700.00	6,620.71	5,735.07	.....	138.85	5,873.92	746.79
Labor.....	2,865.65	4,000.00	.....	6,865.65	3,870.50	2,804.75	.....	6,675.25	420.40
Purchase of automobiles.....	75.00	.....	.....	75.00	.....	.....	.....	.....	75.00
Rent.....	319.35	7,000.00	120.87	7,440.22	7,128.81	.....	.....	7,128.81	311.41
Total.....	16,918.34	114,350.00	13,220.57	144,488.91	124,765.21	7,770.63	1,458.15	133,981.99	10,508.92
Field force:									
Salaries.....	2,895.00	86,520.00	.....	89,415.00	84,194.39	2,357.00	870.07	87,421.46	1,993.54
Killing and burying of animals.....	288.88	.....	.....	288.88	.....	.....	68.50	288.88	218.38
Lighting and water.....	191.92	.....	.....	191.92	4.44	.....	10.21	191.92	181.71
Postage and freight.....	560.34	.....	.....	560.34	.....	.....	109.10	113.54	444.80
Rent.....	1,527.69	.....	.....	1,527.69	.....	.....	142.50	142.50	1,385.19
Telegraph and telephone.....	128.81	.....	.....	128.81	.....	.....	18.93	18.93	106.88
Traveling expenses.....	4,316.49	.....	.....	4,316.49	.....	.....	93.66	93.66	4,222.83
Incidentals.....	4,171.49	.....	.....	4,171.49	290.80	.....	14.15	304.95	3,866.54
Total.....	14,078.62	86,520.00	.....	100,998.62	84,489.63	2,357.00	1,327.12	88,173.75	12,424.87

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ending June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
<i>Department of health—Continued.</i>										
<i>Lepor colony:</i>										
Salaries.....	\$5.49	\$5,130.00		\$5,135.49		\$5,101.23		\$2.16	\$5,103.49	\$32.00
Subsistence.....	2,163.55	6,132.00		8,295.55		6,083.43		3.02	6,086.45	1,010.10
Clothing and bedding.....	1,102.11	2,000.00		3,102.11		1,270.33	\$800.00	96.75	1,940.08	1,012.03
Unexpended property.....	349.76	500.00		849.76		212.20	265.97	37.54	515.71	334.06
Incidentals.....	825.52	2,000.00	\$865.97	3,691.49		2,825.36		.19	2,825.55	865.94
Total.....	4,449.43	15,762.00	865.97	21,077.40		16,004.65	865.97	112.66	17,073.28	4,004.12
<i>Quarantine hospital:</i>										
Salaries.....	118.85	2,232.00		2,348.85		1,808.35	415.00	101.86	2,323.21	25.64
Subsistence.....	563.36	1,000.00		1,563.36		768.11	287.00	241.96	1,317.07	343.28
Lighting and water.....	114.30	300.00	97.00	414.30		232.83		5.30	238.13	116.12
Incidentals.....	57.42	300.00	297.00	654.42		444.04		37.99	482.03	171.70
Building construction and repairs.....	667.78	4,500.00	562.00	5,569.78		4,787.97			4,787.97	871.81
Total.....	1,569.70	8,332.00	896.00	10,737.70		8,110.95	702.00	387.11	9,200.06	1,538.64
<i>Suppression of anemia:</i>										
Salaries.....	98.34			98.34				98.34	98.34	
Incidentals.....	703.24			703.24				703.24	703.24	
Suppression of anemia.....	9,201.49	20,000.00	1,917.00	31,118.49		21,612.13			21,612.13	9,506.36
Total.....	10,003.07	20,000.00	1,917.00	31,920.07		21,612.13		801.58	23,413.71	9,506.36
<i>Mosquito extermination:</i>										
Traveling expenses.....	519.55			519.55						519.55
Incidentals.....	58.26			58.26		4.81			4.81	53.45
Mosquito extermination and control and suppression of malaria.....	5,338.43	25,000.00	256.62	30,595.05		24,977.68	767.00	554.96	26,299.63	4,295.42
Total.....	5,916.24	25,000.00	256.62	31,172.86		24,982.49	767.00	554.96	26,204.44	4,968.42
<i>Blind asylum:</i>										
Salaries.....	4.00	10,008.00		10,012.00		9,964.67	53.00		10,007.67	4.33
Subsistence.....	7,643.76	10,283.00		17,926.76		7,135.96	600.00	341.10	8,077.03	9,769.73
Clothing and bedding.....	807.76	900.00		1,707.76		324.76		164.49	489.25	1,218.50

Unexpended property.	342.45	400.00	743.45	234.43	228.75	475.15	207.30
Medicines and supplies.	534.80	600.00	1,144.80	334.41	247.72	372.20	582.87
Fuel.	331.10	1,000.00	1,331.10	337.50	75.00	412.50	653.60
Incidentals.	1,853.37	800.00	2,653.37	1,408.12	85.33	1,493.45	2,074.50
Water and lighting.	413.06	500.00	913.06	144.78	170.61	315.39	688.00
Transportation of patients.	398.61	500.00	898.61	398.44	197.00	595.44	893.86
Total.	10,581.30	24,801.00	35,382.30	20,422.05	1,341.34	22,763.39	13,626.18
Inmate asylum:							
Salaries.	917.01	27,504.00	28,421.01	27,001.08	8.07	27,009.15	909.26
Subsistence.	19,054.59	35,697.00	54,751.59	41,902.35	131.65	42,034.00	18,900.02
Clothing and bedding.	8,473.58	3,400.00	11,873.58	6,406.34	879.71	7,286.05	9,381.30
Fuel.	342.30	1,000.00	1,342.30	1,610.81	41.55	1,652.36	1,690.00
Incidentals.	598.95	1,500.00	2,098.95	2,729.69	6.00	2,735.69	1,310.85
Water and lighting.	1,399.09	2,000.00	3,399.09	1,908.11	3.41	1,911.52	1,263.31
Medicines and supplies.	800.50	1,000.00	1,800.50	2,179.20	412.67	2,591.87	1,458.57
Transportation of patients.	2,438.55	2,000.00	4,438.55	3,845.48	362.82	4,208.30	2,540.56
Unexpended property.	1,329.07	1,100.00	2,429.07	741.03	815.11	1,556.14	3,172.83
Total.	35,353.19	75,201.00	110,554.19	85,169.09	2,707.40	92,876.49	36,298.70
Girls' charity school:							
Salaries.	97.34	17,624.00	17,721.34	16,420.50	2.00	16,422.50	1,298.84
Subsistence.	2,161.82	20,460.00	22,621.82	15,091.44	135.20	15,226.64	6,892.18
Clothing and bedding.	2,913.74	8,500.00	11,413.74	11,918.10	148.29	12,066.39	10,743.14
Textbooks and school supplies.	148.29	1,000.00	1,148.29	1,000.00	1.62	1,001.62	1,000.00
Unexpended property.	1.62	1,000.00	1,001.62	1,000.00	64.20	1,064.20	1,000.00
Medicines.	64.20	1,000.00	1,064.20	1,000.00	3.43	1,003.43	1,000.00
Fuel.	98.06	1,000.00	1,098.06	1,000.00	98.06	1,098.06	1,000.00
Incidentals.	5.98	1,000.00	1,005.98	1,000.00	5.98	1,005.98	1,000.00
Water and lighting.	11.96	1,000.00	1,011.96	1,000.00	11.96	1,011.96	1,000.00
Total.	5,502.47	56,784.00	62,286.47	43,430.04	469.77	54,900.81	18,630.16
Boys' charity school:							
Salaries.	556.69	27,632.00	28,188.69	26,907.53	176.34	27,083.87	724.47
Subsistence.	4,872.17	38,690.00	43,562.17	24,880.13	696.38	37,576.51	6,976.01
Clothing and bedding.	7,525.48	15,000.00	22,525.48	21,620.79	217.89	21,838.68	4,904.69
Textbooks and school supplies.	217.89	1,000.00	1,217.89	1,000.00	217.89	1,217.89	1,000.00
Unexpended property.	29.80	1,000.00	1,029.80	1,000.00	29.80	1,029.80	1,000.00
Medicines.	174.31	1,000.00	1,174.31	1,000.00	174.31	1,174.31	1,000.00
Fuel.	52.91	1,000.00	1,052.91	1,000.00	52.91	1,052.91	1,000.00
Incidentals.	34.79	1,000.00	1,034.79	1,000.00	34.79	1,034.79	1,000.00
Equipment.	29.88	1,000.00	1,029.88	1,000.00	29.88	1,029.88	1,000.00
Water.	408.30	1,000.00	1,408.30	1,000.00	408.30	1,408.30	1,000.00
Lighting.	73.31	1,000.00	1,073.31	1,000.00	73.31	1,073.31	1,000.00
Total.	14,081.03	81,322.00	95,403.03	73,408.45	1,940.31	87,348.76	12,505.17

EXHIBIT No. 27.—Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in- definite appropriations, July 1, 1918.	Cash dis- bursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
Department of health—Continued.										
Miscellaneous:										
Emergency fund for control and suppression of epidemics.	\$24,389.49		\$6,514.50	\$30,904.99		\$30,434.00			\$30,434.00	\$469.99
Rat extermination.	149.95		1,000.00	1,149.95		827.13			827.13	322.82
Care of tuberculosis patients.	23,515.94	\$40,000.00	5,404.50	68,920.44		56,066.54	\$1,150.00		57,216.54	11,703.90
Education of deaf and dumb children	600.00	1,200.00		1,800.00		1,200.00			1,200.00	600.00
Subvention to "Liga Antitubercu- losa de Puerto Rico".	5,000.00			5,000.00				\$5,000.00	5,000.00	
Subvention to Asilo de Ancianos Desamparados.	400.00			400.00				400.00	400.00	
Subvention to Ponce orphanage.	400.00			400.00				400.00	400.00	
Suppression of Influenza.		300,000.00	50,215.94	350,215.94		299,310.16	58,662.08		322,972.24	27,243.70
Total.....	54,455.38	311,200.00	63,134.94	459,790.32		357,837.83	64,812.08	5,800.00	418,449.91	40,340.41
Total, department of health.....	172,812.17	849,272.00	114,629.95	1,136,714.12		860,319.55	96,261.03	16,900.59	972,481.17	164,282.95
Institute of Tropical Medicine and Hygiene of Porto Rico.										
Salaries.....	157.00	10,240.00		10,397.00		9,898.33	341.67		10,240.00	157.00
Stationery and printing.....	973.72	300.00		1,273.72		130.00	325.00		1,173.07	94.65
Lighting, gas, and water.....	84.77	200.00	226.00	460.77		446.05		794.07	432.57	8.20
Telephone.....	26.95	100.00		126.95		79.07		26.90	105.87	21.08
Traveling expenses.....		600.00		600.00			500.00		500.00	
Care of experimental animals.....	9.23	240.00		249.23		156.87	90.00	1.07	247.94	21.29
Unexpended property.....	103.63	200.00	370.00	673.63		338.19		3.61	341.80	331.83
Postage and freight.....	3.41	100.00	176.67	280.08		185.63		4.20	189.83	90.25
Incidentals.....	40.22	200.00		240.22		182.04		13.00	195.04	45.18
Purchase of experimental animals.....	63.91	200.00	10.00	273.91		96.40	100.00	5.20	224.60	46.34
Instruments, reagents, apparatus.....	522.58	500.00	869.70	1,892.28		1,563.77			1,563.77	318.51
Library.....	59.95	100.00	85.00	244.95		143.45	1.00	18.80	163.25	81.70
Culture media and locs.....	91.81	300.00		391.81		191.60	100.00	13.22	304.82	87.02
Supplies.....	66.61	100.00		166.61		103.00		35.78	138.78	
Medicines.....	62.67	100.00		162.67		22.98		4.50	27.48	135.24
Miscellaneous expenses.....	75.20	1,500.00		1,575.20		1,161.83	300.00		1,461.83	123.37

Total, Institute of Tropical Medicine and Hygiene.....	2,311.76	14,800.00	1,826.51	18,941.26	14,702.16	1,817.07	850.77	17,376.00	1,864.06
<i>Civil service commission.</i>									
Salaries.....	446.98	6,880.00	.....	7,028.98	5,741.17	.....	172.35	5,912.52	1,113.46
Incidentals.....	680.51	50.00	1.50	682.01	245.20	.....	141.15	826.35	266.06
Stationery, printing, and additional personnel.....	.....	840.00	.....	850.00	552.11	.....	.....	552.11	297.89
Telephone.....	.....	25.00	15.00	40.00	13.50	.....	.....	13.50	26.50
Postage and freight.....	.....	175.00	.....	175.00	106.48	15.00	.....	121.48	53.52
Total, civil service commission.....	1,077.49	7,660.00	16.50	8,773.99	6,658.46	15.00	313.50	6,968.96	1,787.08
<i>General miscellaneous.</i>									
Miscellaneous expenditures subject to the approval of the governor.....	6,072.48	30,000.00	6,856.74	43,229.22	20,380.39	17,206.11	3,706.85	41,273.35	2,255.87
Salary of historian.....	.....	1,500.00	.....	1,500.00	1,500.00	.....	.....	1,500.00	.....
Expenses of election in Porto Rico.....	367.59	.....	.....	367.59	364.08	.....	3.51	367.59	.....
Expenses, Insular Bank of Porto Rico.....	20,000.00	.....	.....	20,000.00	.....	.....	.....	.....	20,000.00
Emergency fund subject to allotment by the governor and approval of the executive council.....	985.46	.....	.....	985.46	.....	.....	985.46	985.46	.....
National Guard of Porto Rico fund.....	7,480.59	.....	25.76	7,506.35	3,571.92	.....	5,000.00	3,571.92	3,834.43
Food commission special fund.....	5,000.00	.....	.....	5,000.00	.....	.....	.....	5,000.00	.....
Medical, dental, and pharmaceutical boards:									
Board of medical examiners.....	.....	1,500.00	.....	1,500.00	789.71	.....	.....	789.71	710.29
Board of dental examiners.....	.....	500.00	.....	500.00	281.27	.....	.....	281.27	218.73
Board of pharmaceutical examiners.....	.....	1,500.00	.....	1,500.00	1,350.40	.....	.....	1,350.40	149.60
Settlement of claims of Sabas Honors against The People of Porto Rico.....	2,000.00	.....	.....	2,000.00	.....	.....	.....	.....	2,000.00
Translation bureau:									
Salaries.....	2,375.36	10,430.00	561.90	12,895.36	10,707.05	.....	.....	10,707.05	2,068.31
Incidentals.....	.....	3,000.00	.....	3,561.90	3,561.90	.....	.....	3,561.90	.....
Scholarship for José Colón Román.....	50.00	1,570.00	20	1,570.20	496.33	561.90	.....	1,068.23	511.97
Scholarship for Eufemio Bocanegra.....	400.00	.....	.....	400.00	50.00	.....	.....	50.00	.....
Botanical expert.....	1,200.00	.....	.....	1,200.00	.....	.....	.....	.....	400.00
Provide for the transfer of the remains of Dr. Emeterio Betances.....	1,000.00	.....	.....	1,000.00	.....	.....	.....	.....	1,200.00
Expenses of commission to investigate appropriations and expenditures of the insular government.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000.00
Scholarship for Ricardo Hernandez Romero.....	5,849.74	.....	.....	5,849.74	.....	.....	5,849.74	5,849.74	.....
Repayment of loans made to the insular government during emergency due to earthquake of October, 1918:	50.00	.....	.....	50.00	50.00	.....	.....	50.00	.....
Banco Comercial.....	.....	24,438.82	1,716.55	26,155.67	21,003.50	.....	.....	21,003.50	5,147.17
Royal Bank of Canada.....	.....	12,000.00	5,001.96	17,001.96	17,000.00	.....	.....	17,000.00	1.96
American Colonial Bank.....	.....	9,000.00	5,174.27	14,174.27	14,012.72	.....	.....	14,012.72	161.55
Banco Territorial y Agrícola.....	.....	5,000.00	5,000.37	10,000.37	10,000.00	.....	.....	10,000.00	.....

EXHIBIT No. 27. — Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operation affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
EXECUTIVE—continued.										
<i>General miscellaneous—Continued.</i>										
Expenses of the banquet tendered the French Navy by the legislature		\$900.00		\$900.00		\$900.00			\$900.00	
Board of commissioners for the promotion of uniformity of legislation in the States and Territories of the Union.		123.60		123.60		123.60			123.60	
Irrigation service advances.			\$125,000.00	125,000.00			\$125,000.00		125,000.00	
Entertainment fund for Members of Congress of the United States, guests of the legislature of Porto Rico.		25,000.00	37.80	25,037.80		24,785.00	239.49	\$13.31	25,037.80	
Relief of municipalities.		135,949.64	32,446.50	168,296.14	\$138,299.53	20,996.61			168,296.14	
Relief of school boards.		769.99	30,733.33	31,533.32	26,533.32	5,000.00			31,533.32	
Total, general miscellaneous.	\$53,431.22	263,107.05	212,555.68	528,093.95	164,832.85	165,904.48	143,007.50	15,558.87	499,308.70	\$39,790.25
Total executive.	1,822,318.99	6,270,893.26	2,059,499.43	10,152,611.68	104,832.85	7,020,728.78	502,611.51	100,999.93	7,789,173.07	2,363,478.61
JUDICIAL.										
<i>United States district court for the district of Porto Rico.</i>										
Salaries.	11,487.99			11,487.99				11,487.99	11,487.99	
Traveling expenses, marshals.	136.82			136.82					136.82	
Incidental expenses of the court.	431.88			431.88				431.88	431.88	
Traveling expenses of the court.	646.61			646.61				646.61	646.61	
Incidentals of judge's office.	44.43			44.43				44.43	44.43	
Incidentals of district attorney's office.	100.37			100.37				100.37	100.37	
Pay to bailiffs.	29.00			29.00				29.00	29.00	
Fees and mileage of witnesses.	1,901.39			1,901.39				1,901.39	1,901.39	
Fees and mileage of jurors.	2,320.90			2,320.90				2,320.90	2,320.90	
Fees, United States commissioners.	330.40			330.40				330.40	330.40	
Total, United States district court.	17,431.99			17,431.99				17,431.99	17,431.99	
<i>Insular courts.</i>										
Suprema court.	492.53	52,660.00		53,152.53		51,196.80	446.75		53,642.55	1,509.98

Incense for law books	308.15	1,405.00	1,708.15	1,884.74	1.04	8.60	1,335.78	372.34
Water	4.78	20.00	20.78	68.75		1.56	697.34	242.52
Lighting	8.90	50.00	58.90	73.74			34.21	8.55
Total	854.21	54,680.00	55,932.00	58,325.08	447.70	10.15	53,783.02	2,148.38
Publication of the decision of the supreme court:								
Salaries	692.50	6,200.00	6,892.50	6,118.33			6,118.33	774.17
Incidentals	9,494.61	7,000.00	16,494.61	4,408.04		43.88	4,449.92	12,049.99
Advance sheets	310.67	1,000.00	1,310.67	555.06		56.76	614.82	696.85
Digest of the "Decisiones de Puerto Rico"		1,000.00	1,000.00	57.43			57.43	942.57
Publication of the "Decisions of the Supreme Court"	47.09		47.09	12.00		36.09	47.09	.....
Total	10,548.87	15,200.00	25,748.87	11,147.86		138.73	11,286.59	14,462.28
District courts:								
Salaries—								
San Juan	763.62	34,310.00	35,123.62	33,970.23	350.00		34,320.23	803.39
Ponce	570.94	17,080.00	17,650.94	16,235.28	1,308.34		17,543.62	117.32
Mayaguez	106.33	15,170.00	15,276.33	14,986.66	170.00	100.00	15,256.66	18.67
Arecibo		14,720.00	14,720.00	14,637.33	80.00		14,717.33	2.67
Humacao	279.57	15,680.00	15,959.57	15,586.00	379.57		15,955.57	4.00
Guayama	632.50	14,720.00	15,352.50	14,720.00			14,720.00	632.50
Aguaadilla	94.72	14,720.00	14,814.72	14,311.22	300.00		14,611.22	203.50
Purchase of law books	135.93	500.00	635.93	269.05		3.68	272.73	363.20
Postage	5.00	750.00	755.00	727.05			727.05	27.95
Incidentals	236.41	5,000.00	5,236.41	7,770.59		195.92	7,466.51	903.31
Water	179.00	240.00	419.00	108.12		112.34	217.46	212.44
Lighting	55.06	240.00	295.06	303.82		15.67	319.49	35.56
Rent		3,086.38	3,086.38	2,821.58			2,821.58	215.00
Traveling expenses, judges, and fiscal.	548.88	2,500.00	3,048.88	1,858.84		222.72	2,081.56	967.32
Care of horses	2.50	1,350.00	1,352.50	1,372.84			1,372.84	9.66
Traveling expenses, marshals.	230.01	1,150.00	1,380.01	31.10	100.00	112.23	243.33	136.68
Autopsies and examinations	438.00	1,250.00	1,688.00	734.00		124.00	858.00	830.00
Fees of defense witnesses in criminal cases	10,000.00	10,000.00	20,000.00	20.40	9,900.00		9,920.40	10,079.60
Fees of jurors	18,229.01	20,000.00	43,956.11	12,961.39	8,915.00	9,291.29	31,067.68	12,517.43
Fees of witnesses in cases of lunacy	241.00	1,300.00	1,541.00	1,252.00		86.00	1,338.00	203.00
Fees of witnesses	7,634.18	18,000.00	30,909.13	15,054.88	5,000.00	5,310.30	25,965.18	4,943.95
Total	40,382.45	190,786.38	245,033.29	169,729.18	26,502.91	15,574.15	211,806.24	33,227.05
Municipal courts:								
Salaries	735.83	101,880.00	102,615.83	99,877.57	1,750.00	28.00	101,653.57	882.26
Incidentals	1,353.48	5,000.00	6,353.48	1,484.26	195.25	627.83	5,307.34	1,273.34
Rent	728.60	7,250.00	7,978.60	7,443.03			7,443.03	577.77
Traveling expenses, court officials	356.57	4,000.00	4,356.57	3,574.97		44.66	3,619.63	739.94
Care of horses	24.46	3,346.00	3,370.46	3,945.60			3,945.60	24.46

EXHIBIT No. 27. — Consolidated statement of insular revenue appropriations for the fiscal years 1918-19, 1917-18, 1916-17, no fiscal year, and indefinite and operations affecting them during the year ended June 30, 1919—Continued.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances in definite appropriations, July 1, 1918.	Cash disbursements.	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
INTERIOR—continued.										
<i>Insular Courts—Continued.</i>										
Municipal Courts—Continued.										
Traveling expenses, marshals.	\$100.13	\$2,100.00		\$2,200.13		\$1,632.06		\$62.97	\$1,695.03	\$505.10
Fees of witnesses.	333.42	2,000.00		2,333.42		1,691.83		13.62	1,705.45	647.97
Total.	3,687.64	125,618.00	\$195.25	129,500.89		122,049.32	\$1,945.25	775.08	124,769.65	4,731.24
Total, insular courts.	55,473.17	386,224.38	14,507.50	456,215.05		356,252.04	28,885.95	16,498.11	401,646.10	54,588.95
<i>Registrars of property.</i>										
Salaries:										
San Juan.	221.12	13,740.00		13,961.12		12,820.99	700.00		13,520.99	440.13
Ponce.		6,050.00		6,050.00		6,040.00			6,040.00	10.00
Mayaguez.	30.56	5,450.00		5,480.56		5,448.33		30.56	5,478.89	1.67
Arecibo.	.01	6,050.00		6,050.01		6,046.68			6,046.68	3.33
San German.		4,420.00		4,420.00		4,420.00			4,420.00	
Humacao.	130.27	4,420.00		4,550.27		4,420.00			4,420.00	130.27
Caguas.		4,420.00		4,420.00		4,281.34	100.00		4,381.34	38.66
Guayama.	35.00	4,420.00		4,455.00		4,268.67	100.00		4,368.67	86.33
Armedilla.		3,820.00		3,820.00		3,820.00			3,820.00	
Clerk at large for registries of property.	48.33	2,800.00		2,848.33		2,800.00			2,800.00	48.33
Incidentals.	613.77	3,180.00	1,632.00	5,045.77		3,758.69		24.02	3,782.71	1,263.06
Rent.		3,200.00	20.00	3,220.00		3,181.03			3,181.03	138.97
Total, registries of property.	1,079.08	59,370.00	1,632.00	62,101.08		59,105.73	900.00	54.58	60,060.31	2,040.75
Total, judicial.	73,964.22	445,604.38	16,159.50	535,748.10		415,357.77	29,795.95	33,984.68	461,708.41	59,009.70
RECAPITULATION.										
Legislative.	20,263.46	100,064.80	1,971.58	122,299.84		89,163.60	1,971.58	7,104.78	96,239.96	24,080.88
Executive.	1,822,315.90	6,270,883.20	2,059,469.43	10,152,651.68		7,020,728.78	502,611.51	100,999.93	7,523,339.22	2,363,478.61
Judicial.	73,964.22	445,604.38	16,159.50	535,748.10		415,357.77	29,795.95	33,984.68	479,138.40	59,009.70
Grand total.	1,916,566.67	6,816,532.44	2,077,600.51	10,810,729.62		7,525,250.15	534,379.04	142,089.39	8,366,551.43	2,444,178.19

EXHIBIT NO. 28.—Recapitulation by departments.

Description.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918.	Repayments and transfers from other appropriations.	Total credits.	Debit balances, in- definite appropriations, July 1, 1918.	Cash dis- bursements.	Transfers to other appropriations.	Expenses.	Total debits.	Balance un- expended June 30, 1919.
LEGISLATIVE.										
Senate of Porto Rico.....	\$15, 113.17	\$43, 220.00	\$315.00	\$58, 648.17	.....	\$58, 851.25	\$315.00	\$6, 211.49	\$45, 377.74	\$13, 270.43
House of representatives.....	5, 180.29	56, 844.80	1, 656.38	63, 681.67	.....	50, 312.55	1, 656.38	883.29	52, 862.22	10, 519.46
Total, legislative.....	20, 293.46	100, 064.80	1, 971.38	122, 329.84	.....	89, 163.80	1, 971.38	7, 104.78	98, 239.96	24, 089.88
EXECUTIVE.										
Office of the governor.....	2, 217.03	29, 370.00	3, 894.99	35, 462.02	.....	30, 068.11	725.00	345.34	31, 558.45	3, 913.57
Executive secretary.....	7, 755.99	84, 980.00	1, 344, 130.13	1, 436, 876.52	.....	1, 376, 477.26	54, 399.02	890.25	1, 431, 736.53	5, 140.29
Public service commission.....	1, 019.93	16, 520.00	.....	17, 539.93	.....	12, 962.96	.....	7.16	12, 970.12	4, 569.81
Office of the attorney general.....	32, 405.91	331, 224.10	60, 065.01	432, 695.02	.....	330, 570.13	38, 706.64	8, 055.52	377, 332.28	55, 062.74
Office of the treasurer.....	38, 700.08	610, 251.83	25, 280.47	674, 232.38	.....	614, 372.59	14, 798.29	19, 086.97	648, 248.85	25, 983.83
Office of the auditor.....	12, 170.06	86, 520.00	2, 065.69	100, 755.75	.....	84, 746.96	1, 900.00	3, 379.47	90, 026.43	10, 730.90
Department of the interior.....	1, 390, 685.69	1, 576, 877.08	170, 767.10	3, 138, 329.87	.....	1, 194, 780.33	92, 048.34	3, 216.55	1, 290, 045.22	1, 847, 384.60
Department of education.....	58, 171.94	1, 776, 261.00	58, 338.73	1, 893, 846.67	.....	1, 688, 400.95	32, 201.29	4, 977.03	1, 725, 589.27	168, 258.40
Carnegie library.....	8, 683.99	15, 560.00	761.71	25, 245.70	.....	15, 265.90	618.74	677.37	16, 592.01	8, 668.69
Government of the island of Culebra.....	7, 797.92	4, 980.25	98.87	12, 876.04	.....	4, 986.18	98.87	284.41	5, 349.46	507.58
Department of agriculture and labor.....	19, 181.66	102, 630.00	16, 092.57	137, 904.23	.....	95, 092.01	14, 707.88	12, 545.50	122, 345.30	15, 358.73
Insular police.....	20, 445.46	500, 790.00	33, 898.72	555, 134.18	.....	524, 651.04	11, 408.74	13, 744.22	548, 392.00	10, 732.18
Department of health.....	172, 812.17	849, 272.00	114, 639.95	1, 136, 714.12	.....	860, 319.55	95, 261.03	16, 900.59	972, 481.17	164, 232.95
Institute of Tropical Medicine and Hygiene of Porto Rico.....	2, 311.75	14, 800.00	1, 829.51	18, 941.26	.....	14, 702.16	1, 817.67	858.77	17, 378.60	1, 564.66
Civil-service commission.....	1, 077.49	7, 680.00	18.99	8, 776.48	.....	6, 638.46	15.00	313.50	6, 666.96	1, 787.08
General miscellaneous.....	53, 451.22	263, 107.08	212, 555.68	529, 083.98	.....	165, 904.48	143, 007.50	15, 538.87	489, 306.70	89, 780.25
Total, executive.....	1, 822, 318.99	6, 270, 863.26	2, 059, 469.43	10, 152, 651.68	164, 832.85	7, 020, 728.78	502, 611.51	100, 999.98	7, 789, 173.07	2, 863, 473.61
JUDICIAL.										
United States district court.....	17, 431.99	386, 234.38	.....	17, 431.99	.....	356, 252.04	28, 896.95	17, 431.99	17, 431.99	64, 668.96
Insular courts.....	56, 473.17	59, 370.00	14, 507.50	456, 215.06	.....	56, 105.73	900.00	16, 498.11	401, 646.10	2, 940.76
Registrars of property.....	1, 079.06	.....	1, 652.00	62, 101.06	.....	.....	.....	38, 984.68	479, 138.40	56, 009.70
Total, judicial.....	73, 984.22	445, 604.38	16, 169.50	535, 748.10	.....	415, 357.77	29, 795.95	142, 099.39	8, 366, 551.43	2, 444, 173.19
Grand total.....	1, 916, 596.67	6, 816, 532.44	2, 077, 600.51	10, 810, 729.63	164, 832.85	7, 526, 250.15	534, 379.04	142, 099.39	8, 366, 551.43	2, 444, 173.19

EXHIBIT No. 29.—Recapitulation, by fiscal years.

Appropriations.	Balance un- expended July 1, 1918.	Appropriations effective since July 1, 1918. ¹	Repayments and transfers from other appropriations.	Total credits.	Debit bal- ances, in- definite appropriations, July 1, 1918.	Cash dis- bursements. ²	Transfers to other appropriations.	Lapses.	Total debits.	Balance un- expended June 30, 1919.
Fiscal year 1918-19.....	.....	\$5,573,970.28	\$372,534.20	\$5,946,504.48	.....	\$5,337,635.41	\$287,633.06	.....	\$5,625,268.49	\$341,235.99
Fiscal year 1917-18.....	\$344,222.10	.....	26,973.73	371,195.83	.....	150,885.30	24,107.92	.....	174,993.22	106,202.61
Fiscal year 1916-17.....	122,152.37	.....	1,227.34	124,379.71	.....	8,774.07	1,233.92	.....	124,325.86	.....
No fiscal year.....	1,450,222.20	933,800.00	1,479,775.87	3,863,798.07	.....	1,812,949.03	116,404.12	\$114,317.87	1,957,068.48	1,906,739.59
Indefinite.....	.....	171,178.38	148,921.24	320,099.62	.....	349,842.58	126,000.00	27,705.33	484,908.77	.....
Relief of municipalities.....	.....	\$136,946.64	32,445.80	169,392.44	\$133,392.53	29,994.61	.....	68.19	29,994.61	.....
Relief of school boards.....	.....	\$799.99	30,712.33	31,512.32	26,533.32	5,000.00	.....	.....	5,000.00	.....
Total.....	1,916,596.67	6,816,532.44	2,092,600.51	10,825,729.62	164,832.85	7,704,063.00	534,379.04	142,089.39	8,381,551.43	2,444,178.19

¹ This column covers appropriations made during the first session of the ninth legislature and subsequently, for the fiscal year 1918-19, to cover deficiencies of that year and other years, for no definite fiscal year, and in addition appropriation authorized during past and present years to meet expenditures from indefinite appropriations.

² Cash disbursements include advances to disbursing officers and not their net disbursements. They are required to repay all unexpended balances at the close of the year, and the amounts are included in the column for repayments. This is done to agree with the total of cash repayments and disbursements of Exhibit No. 25.

³ No appropriation warrants are necessary for these two appropriations, representing loans to municipalities and school boards, because they are indefinite no-fiscal year appropriations, and the repayment of the loans would close them. The credits by appropriations are given here to offset the debit balances in the accounts, which would otherwise falsely reduce the combined balances of all classes unexpended June 30, 1919.

EXHIBIT No. 30.—Insular revenues—statement of cash receipts and disbursements, from July 1, 1915, to June 30, 1919, by years.

[Not to be confused with accrued revenues, Exhibit No. 4, and accrued expenses, Exhibit No. 5.]

RECEIPTS.

	1915	1916	1917	1918	1919
Balance on hand beginning of period.	\$283,273.23	\$575,310.54	\$159,767.10	\$581,476.17	\$708,540.31
Excess over legal municipal and school board maxima (law No. 70 of 1916).....				426,278.19	571,071.32
United States internal revenues.....				1,089,685.40	929,571.08
Customs.....	350,763.16	296,500.00	378,000.00	370,000.00	355,000.00
Property taxes, insular proportion.....	176,623.61	184,423.37	635,754.38	229,024.24	257,327.12
Excise taxes:					
Tobacco stamps.....	988,065.14	945,840.82	1,050,244.74	1,051,300.09	1,225,700.59
Other stamps.....	1,682,844.19	1,731,769.69	1,840,742.21	1,066,445.69	1,185,510.17
Inheritance taxes.....	33,431.65	17,390.52	34,660.27	52,706.06	42,594.68
Telegraph and telephone receipts.....	74,640.28	71,836.21	87,110.52	96,961.79	109,591.26
Court fines and fees.....	100,529.15	168,098.39	147,415.74	41,879.34	40,678.16
Harbor and dock fees.....	23,467.78	25,418.61	28,134.64	24,376.77	22,890.24
Interest.....	93,615.53	125,884.52	141,335.67	155,015.33	169,012.87
Industrial and commercial license taxes.....	926.89	1.25	93.75		
Income tax.....	70,636.55	136,363.26	410,107.52	566,831.93	802,123.89
Proportion of municipal income for sanitation.....	110,478.55	108,096.67	121,694.31	119,726.05	122,494.81
Miscellaneous.....	\$2,271,060.41	\$492,321.07	\$484,124.46	165,848.40	427,538.25
Total insular revenues.....	5,977,102.89	4,202,934.38	5,259,418.21	5,426,079.28	6,211,374.30
Repayments on loans by municipalities and school boards:					
Cash.....	135,374.20	69,560.38	135,189.59	14,210.63	16,679.83
Bonds.....	206,000.00	435,500.00	473,000.00		46,500.00
Miscellaneous repayments and transfers.....	885,279.84	311,345.09	296,133.22	193,917.06	420,516.64
Bureau of supplies, printing, and transportation, repayments.....	355,950.24	342,041.05	604,327.72	898,461.69	1,202,397.90
Total revenues and repayments.....	7,523,707.17	5,361,380.90	6,768,068.74	6,537,668.66	7,897,468.67
Total.....	7,811,980.40	5,936,691.44	6,927,835.84	7,119,144.83	8,606,008.96

DISBURSEMENTS.

LEGISLATIVE.					
Executive council.....	\$35,876.10	\$38,767.00	\$31,924.15	\$2,885.84	
House of delegates.....	29,984.77	33,775.00	31,091.49	1,584.60	\$50.00
Senate of Porto Rico.....				36,494.48	38,861.25
House of representatives.....				49,768.18	50,262.35
Miscellaneous legislative: Printing and publication of laws, etc.....	1,449.78	4,016.23	458.98	23,662.17	
EXECUTIVE.					
Office of the governor and secretary (exclusive of bureau of supplies, printing, and transportation).....	77,277.30	86,278.87	83,255.64	83,420.75	82,572.84
Public service commission.....					12,962.96
Office of the attorney general.....	36,229.63	37,067.50	43,001.22	56,712.30	56,780.87
Penal institutions.....				216,668.03	264,762.81
Maintenance of prisoners in municipal jails.....	12,977.17	15,286.71	13,466.89	13,237.84	9,326.44
Office of the treasurer.....	230,568.12	211,271.85	291,575.37	250,738.53	614,373.59
Office of the auditor.....	62,218.69	59,740.86	58,054.45	76,554.63	84,746.68

¹ The decrease in these amounts is due to the change in the law requiring that amounts received as fees in civil cases be paid in internal revenue stamps. Such payments are included in the item "Excise taxes, other stamps."

² This amount includes \$500.27 interest paid by irrigation service on account of loan of \$55,000 made during fiscal year 1917-18.

³ This amount includes \$700,000, loan made by The Mechanics & Metals National Bank of New York to The People of Porto Rico; \$768,019.74, part of proceeds from sale of \$1,000,000 public improvement bonds; \$641,719.16, proceeds from sale of \$655,000 refunding bonds.

⁴ This amount includes \$100,000 repaid by irrigation service on account of loan made during fiscal year 1914-15; \$299,656.67, proceeds from sale of \$300,000 refunding bonds.

⁵ This amount includes \$301,733.33, proceeds from sale of \$300,000 refunding bonds.

⁶ Disbursements for previous years carried under "Miscellaneous legislative."

EXHIBIT No. 30.—*Insular revenues—statement of cash receipts and disbursements.
from July 1, 1915, to June 30, 1919, by years—Continued.*

DISBURSEMENTS—Continued.

	1915	1916	1917	1918	1919
EXECUTIVE—continued.					
Department of the Interior:					
Office of the commissioner	\$87,531.09	\$85,648.53	\$96,619.42	\$114,964.27	\$119,630.49
Maintenance and repair of public roads and bridges	468,297.10	441,760.09	676,466.74	736,911.45	672,334.62
Maintenance and repair of public buildings	85,564.84	39,706.62	65,985.36	93,416.44	87,536.35
Insular telegraph	72,807.40	71,679.29	83,948.19	99,763.09	111,447.39
Construction, maintenance, and repair of harbor improvements	307.59	492.74	4,649.32	3,004.75	989.15
Miscellaneous	19,338.86	40,643.06	59,099.21	49,321.54	202,863.38
Department of Education:					
Office of the commissioner	54,273.05	43,546.87	48,606.96	51,641.69	58,712.75
Public schools	1,267,611.46	1,198,249.53	1,341,538.96	1,422,896.48	1,581,009.57
University of Porto Rico	78,187.08	35,380.71	50,545.96	50,205.63	51,365.95
Miscellaneous	87,744.68	46,762.04	34,906.22	10,331.94	2,298.68
Insular library	10,019.92	9,213.17	9,209.58	11,325.26	15,286.99
Government of the island of Culebra	2,136.13	3,796.87	3,008.70	3,748.38	4,908.18
Department of labor, charities and correction: General	372,577.31	385,282.74	349,071.90	78,567.31	95,092.04
Department of agriculture and labor				476,621.72	524,661.64
Insular police	438,490.82	441,205.53	431,146.37		
Department of health:					
General	260,545.58	200,536.44	224,923.01	473,323.81	838,707.42
Suppression of anemia	9,840.66	6,890.55	7,628.86	9,151.83	21,612.13
Institute of Tropical Medicine and Hygiene ¹					14,762.16
Commercial and agricultural development	52,236.67	37,563.87	42,245.46		
Civil service commission	8,355.53	7,013.33	6,734.28	7,635.42	6,668.46
Loans to municipalities (under miscellaneous)	234,727.15	372,960.00	150,748.96	59,826.79	29,996.61
Loans to school boards (under miscellaneous)	90,390.49	76,000.00	324,000.00	25,000.00	5,000.00
Purchase and expenses, bureau of supplies, printing, and transportation	353,835.56	343,766.00	706,199.79	972,480.31	1,334,402.53
Election expenses	64,256.80	8,587.33	23,481.21	25,068.28	364.06
Miscellaneous (see also loans to municipalities and school boards), general	557,021.55	181,486.07	180,320.64	244,956.03	130,542.79
Other disbursements ²	96,000.00	28,500.00	119,000.00	85,000.00	114,589.60
Transfers	1,544,234.90	733,415.86	324,779.18	72,896.27	127,872.99
JUDICIAL.					
General	493,806.06	460,779.06	428,076.16	421,188.48	415,357.77
Total disbursements, loans and transfers	7,236,669.86	5,776,924.34	6,246,359.67	6,410,604.52	7,767,623.05
Balance on hand June 30	575,310.54	159,767.10	581,476.17	708,540.31	838,366.98
Total	7,811,980.40	5,936,691.44	6,927,835.84	7,119,144.83	8,606,000.96

¹ Disbursements for previous years carried under "General miscellaneous."

² Municipal and school board bonds redeemed.

NOTE.—This statement is stated in the form of previous years for comparison, and the classifications do not exactly agree with the statements of the current year. This and the following statement are not for income and expenses, but for cash receipts and disbursements vastly different in their nature.

EXHIBIT No. 31.—*Trust fund—Statement of receipts and disbursements from July 1, 1916, to June 30, 1919, by years.*

[Not to be confused with expense accounts of Exhibit No. 5.]

RECEIPTS.

Description.	1915	1916	1917	1918	1919	Balance June 30, 1919.
Balance on hand at the beginning of period.....	\$1,154,065.06	\$2,097,185.24	\$2,741,881.08	\$3,524,369.38	\$3,752,908.12	
Municipal bond redemption tax:						
San Juan.....	33,398.47	31,948.63	88,322.44	96,029.00	111,895.70	
Mayaguez.....	42.79	78.79	19.09	2.37	2.42	
Ponce.....	15,045.28	15,569.89	99.59	12.72	3.27	
Arecibo.....	7,467.21	7,114.33	3,718.95	882.79	919.97	
Barranquitas.....		707.00	882.79	860.51	12,419.06	
Guayama.....		9,509.45	5,550.38	4,915.67	1,686.16	
Mamabo.....		1,298.38	1,382.50	1,681.09	3,108.32	
Arroyo.....			1,990.00	1,641.17		
Special municipal bond redemption tax: San Juan.....				27,633.37	62,656.14	
Municipal property tax:						
General fund.....	1,064,272.79	1,113,560.43	1,110,983.25	1,375,499.00	1,537,892.25	
Road fund.....	117,519.07	123,040.98	123,295.20	153,002.09	170,664.59	
School fund.....	394,276.61	411,358.28	411,426.21	509,500.41	568,859.32	
School tax.....	173,044.12	178,246.28	178,943.70	221,477.77	249,062.39	
Public improvement fund.....	209,791.64					
Construction of harbor improvements at San Juan.....	205,648.60	1,752.31	3,787.62	100,280.00	138.60	
San Juan harbor fund.....	26,615.94	23,960.91	27,777.56	25,763.31	23,820.41	
Insular bond redemption tax.....	175,213.04	182,591.10	182,807.94	226,403.10	253,022.59	
Taxes paid under protest.....	46,176.43	41,622.58	104,813.12	248,487.45	213,753.65	
Irrigation fund.....	586,669.84	664,634.21	526,162.84	429,569.07	595,261.91	
University fund.....	5,756.98	8,566.76	48,611.03	53,901.14	55,786.84	
University agricultural fund.....	50,261.52	50,407.54	50,089.77	50,664.70	50,831.25	
University income fund.....	892.39	320.62	320.62	340.64	349.32	
Permanent university fund.....	106.88	106.88	106.88	113.55	116.43	
Funds for insular fair.....	946.57	75.00				
School building fund.....	9,400.15	11,017.00	10,675.13	10,894.41	9,061.81	
School extension in Porto Rico:						
General fund.....						
Miscellaneous.....						
Sanitation fund for the suppression of epidemics.....	2,305.80	4,513.00	2,895.50	2,338.25	2,731.38	
Municipal bond funds.....	40,216.15	52,664.25	59,198.56	68,063.64	71,893.99	
School board bond funds.....	9,367.13	10,777.38	14,675.50	25,098.13	22,992.50	
Industrial and commercial licenses.....	932.36	1.25	82.50			
Redemption of municipal bonds.....	69,955.11	63,123.24	70,130.77	76,000.00	71,298.78	
Redemption of school board bonds.....	26,500.00	30,500.00	30,933.33	62,066.67	62,500.00	
Proceeds of sale of insular bonds for road construction.....	148.50					
Outstanding liabilities.....	1,790.82	2,075.51	7,871.70	2,333.76	4,000.14	
Cash bond deposits.....	1,065.00	1,710.00	2,100.00	4,743.65	3,868.90	
Franchise deposits.....	875.00	961.71	697.38	633.18	1,436.26	
Teachers' pension fund.....					15,630.88	
Unclaimed wages.....	2,666.70	3,439.78	3,477.03	2,145.02	1,823.52	
Wharf and harbor fund.....			2,771.57	7,810.28	36,623.72	
Road bond funds of 1916.....			522,323.35	1,768.63	499,525.15	
Food commission fund.....			200,000.00	1,820,000.00	650,000.00	
Construction of rural school building.....			5,000.00	5,000.00		
Miscellaneous.....	6,627.22	10,311.92	41,175.99	60,138.87	187,598.65	
Total receipts.....	3,255,026.11	3,047,555.34	3,845,099.79	5,676,812.62	5,553,261.16	
Transfers.....	1,544,234.90	733,415.86	324,779.18	72,896.27	127,872.90	
Total revenues and transfers.....	4,799,261.01	3,780,971.20	4,169,878.97	5,749,708.89	5,681,134.06	
Total debits.....	5,963,326.09	5,878,156.44	6,911,760.00	9,274,078.27	9,434,042.18	

EXHIBIT No. 31.—*Trust fund—Statement of receipts and disbursements from July 1, 1915, to June 30, 1919, by years—Continued.*

DISBURSEMENTS.

Description.	1915	1916	1917	1918	1919	Balance June 30, 1919.
Municipal bond redemption tax:						
San Juan.....	\$37,424.64	\$31,473.11	\$67,403.49	\$48,327.19	\$45,775.66	\$125,216.32
Mayaguez.....	42.79	74.36	22.96			
Ponce.....	15,064.90	15,361.81	307.67	2.37	2.42	
Arecibo.....	7,467.21	7,064.09	3,769.19	12.72	3.27	
Guayama.....		681.77	8,050.69	6,123.11	17,286.35	242.64
Maunabo.....		298.38	332.50	337.50	333.95	4,995.80
Barranquitas.....		229.29	882.79	837.71	1,273.54	146.94
Arroyo.....			990.00	1,472.50	3,464.67	812.32
Special municipal bond redemption tax, San Juan.....				9,014.19	47,107.74	34,167.58
Municipal property tax:						
General fund.....	1,069,062.81	1,102,695.79	1,121,847.91	1,375,493.00	1,522,915.95	14,976.30
Road fund.....	120,456.91	121,639.45	124,646.68	153,002.09	168,998.72	1,665.98
School fund.....	405,158.45	406,734.07	416,050.42	509,500.41	563,298.03	5,561.29
School tax.....	177,880.49	176,214.28	180,975.70	221,477.77	246,612.38	2,470.01
Irrigation fund.....	724,694.82	640,878.55	537,024.55	544,170.21	531,335.57	69,155.77
University fund.....	26,442.80	35,332.97	40,848.28	55,287.07	59,441.63	37,154.61
University income fund.....	571.77				1,477.23	174.59
University agricultural fund.....	47,221.82	51,286.49	49,719.51	52,948.44	51,243.14	
Permanent university fund.....			300.00	520.00	500.00	151.16
Funds for insular fair.....	629.69	575.46				
School building fund.....			18.43			29,960.64
School extension.....						500.40
Construction of rural school buildings.....						8,000.00
Redemption certificates, indebtedness.....						
Workman's relief trust fund.....		1,026.32	11,402.82	55,513.84	97,677.66	60,108.24
Escheated inheritance fund.....						478.65
Comerio-Cidra Road.....		3,010.49	2,073.47			5,000.00
Comerio-Aguas Buenas Road.....		3,051.45	193.15			
Corozal-Barros Road.....			5,570.07			
Lares-Adjuntas Road.....			7,286.98	43,191.78	76,436.67	108,048.67
Loíse-Juncos Road.....					2,469.59	14.88
Ciales-Juana Diaz Road.....			6,423.30	38,630.95	59,401.27	88,083.86
Barros-Corozal Road.....			6,404.62	62,230.53	17,507.14	27,562.26
Utua-Lares Road.....			2,648.18	9.60		
Mayaguez-Maricao Road.....			2,862.74	23,265.15	21,182.51	26,704.08
Yauco-Lares Road.....				34,301.57	55,313.84	18,765.13
Vieques Road.....				8,420.44	15,438.05	813.07
Arecibo-Lares Road.....				64,244.79	74,438.96	27,828.50
Yabucoa-Humacao bridges.....				15,834.62	43,772.47	20.00
Fajardo-Caiba bridges.....				16,469.00	5,809.52	
Caiba-Naguabo bridges.....				14.00		
Maricao-Indiera Road.....				2,413.57	1,572.18	
Wharf and harbor fund.....			265.27	3,831.74	14,904.53	
Food commission fund.....			200,000.00	1,820,000.00	650,000.00	
Ponce school board debt to municipality.....		225.00				
Securities, loans to insular government.....						401,000.00
Proceeds of sale of insular bonds for road construction.....	1,834.80	72.76				
Taxes paid under protest.....	71,155.45	14,764.54	69,861.30	20,311.40	170,724.82	261,168.87
Outstanding liabilities.....	298.36	217.43	4,776.07	3,147.04	2,563.21	14,953.49
Cash bond deposits.....	620.00	310.00	2,260.00	2,426.71	3,685.58	6,016.26
Franchise deposits.....	1,059.47	911.83	903.00	800.17	620.88	1,041.38
Insular bond redemption tax:						
Payment on principal.....	50,000.00	50,000.00	50,000.00	50,000.00	50,000.00	
Payment on interest.....	25,000.00	31,500.00	33,000.00	36,000.00	34,000.00	1,121,531.93
Refunds.....	416.28	204.16	404.47	69.62	226.29	
Industrial and commercial licenses.....	2,167.66	1.25	82.50			
Sanitation fund for the suppression of epidemics.....	54.05					2,256.50

EXHIBIT No. 31.—Trust fund—Statement of receipts and disbursements from July 1, 1915, to June 30, 1919, by years—Continued.

DISBURSEMENTS—Continued.

Description.	1915.	1916.	1917.	1918.	1919.	Balance June 30, 1919.
Suppression of trachoma.	\$4,761.62	\$600.00	\$600.00	\$309.00	.....	.....
Redemption of municipal bonds.	53,000.00	20,000.00	72,130.77	50,711.68	\$96,500.00	\$66,043.78
Municipal bond funds.	40,216.15	52,664.26	59,198.56	68,063.64	71,893.89	.....
Redemption of school-board bonds.	20,000.00	6,500.00	30,500.00	30,500.00	125,000.00	.....
School-board bond funds.	9,367.13	10,777.38	14,673.50	25,098.13	22,992.50	.....
Unclaimed wages.	2,314.39	1,642.22	3,860.22	2,388.19	2,377.37	1,478.63
San Juan Harbor fund.	16,335.00	20,325.00	20,156.80	24,000.00	24,000.00	111,822.38
Construction of harbor improvements at San Juan.	195,053.32	135,869.87	62,592.94	21,452.19	59,070.01	40,966.44
Teachers' pension fund.	.....	.....	.....	.....	347.38	24,141.91
Fund for the protection of coles.	.....	.....	.....	.....	819.71	5,966.87
Capital building fund.	.....	.....	.....	.....	.....	11,145.20
Securities, refunding bonds.	.....	.....	.....	.....	.....	1,260,500.00
Proceeds, public improvement bonds.	739.70	.....	.....	.....	.....	.....
Transfers.	698,419.90	173,415.73	134,975.28	300.00	145,871.86	.....
Miscellaneous.	12,198.47	18,596.86	23,090.84	18,697.52	43,343.60	51,009.17
Total.	3,856,140.85	3,136,275.41	3,387,390.62	5,521,170.15	5,250,111.75	4,183,930.43
Balance as of June 30.	2,097,185.24	2,741,831.03	3,524,399.38	3,752,906.12	4,183,930.43	.....
Total.	5,953,326.09	5,878,156.44	6,911,780.00	9,274,076.27	9,434,042.18	.....

EXHIBIT No. 32.—Estimated insular revenue cash income, appropriation assets, and appropriations for the fiscal year ending June 30, 1920.

ESTIMATED CASH INCOME AND APPROPRIATION ASSETS.

Treasurer's estimate of cash income:	
Customs.	\$370,000.00
Excise taxes.	3,426,000.00
Property taxes.	295,347.00
Telephone and telegraph receipts.	100,000.00
Court fees and fines.	30,000.00
Interest on loans to municipalities and school boards.	80,000.00
Interest on bank deposits.	70,000.00
Miscellaneous income.	60,000.00
Income taxes.	2,625,000.00
Inheritance taxes.	45,000.00
Harbor and dock fees.	20,000.00
Total.	7,121,347.00
Less reserve for income billed.	16,850.14
	\$7,104,496.86
Appropriation assets at July 1, 1919:	
Loans to municipalities and school boards (repayable to indefinite appropriations).	\$136,649.63
Less reserve for municipal loan account.	1,000.00
	135,649.63
Cash available for insular revenue expenditures—	
With depositaries (see Exhibit 22).	838,385.93
Excess of securities hypothecated.	\$ 6,500.00
	844,885.93
Less notes payable.	240,000.00
	604,885.93

¹ The appropriations for these loans known as "Relief of municipalities" and "Relief of school boards" are revolving indefinite appropriations. The two amounts composing this balance are carried as debit balances in the appropriations mentioned because no amount can be fixed for the appropriations in advance for the reason that loans of an indefinite amount are authorized by law. Instead of considering the total of loans outstanding as an asset of the appropriations that, when converted into cash, will create appropriations equal in amount to the repayments made by the municipalities and school boards, the better practice now seems to be to treat the sums of such repayments as offsets to the debits. The repayments when all loans shall have been repaid equal the expenditures, and no appropriation warrant will be necessary to close the appropriations, as is the case with nonrevolving indefinite appropriations.

² This item represents excess of bonds given as collateral security for loans contracted by the insular government. This was done in order to keep certain bonds together and avoid splitting same up in fractional parts.

EXHIBIT No. 33.—Expenditures for maintenance of insular roads during year ended June 30, 1919.

Road No.	Description.	Gen-eral main-av-er-age.	Length main-tained.	Broken stone.			Class of work.			Equipment.							
				Furnishing.		Re-vear-ing weak-ing sur-face, Placing.	Ditches, should-ers, and side slopes.		Camliners work.			Equipment.					
				Contract.	Adminis-tration.		Con-struction and regrad-ing.	Clean-ing.	Remov-ing land-slides.	Repair-ing pits and re-storing top opening blinder.	Cleaning, weeding, and trimming short-handlers.	Remov-ing slides.	Ma-chin-ery, pur-chase and re-pairs.	Mis-cel-lane-ous, pur-chase and re-pairs.			
Km.																	
1	San Juan-Ponce	\$660.34	134.8	\$15,249.36	\$16,820.01	\$13,413.51	\$14.30			\$83.03	\$108.88	\$1,135.24	\$11,883.55	\$150.30	\$300.69	\$11.00	\$27.90
2	Santurce-Ponce (via Mayaguez)	446.55	257.8	27,815.86	19,599.73	26,055.96		\$1,196.39	\$264.83	620.92	1,238.19	2,645.82	18,783.03	250.29	20.00	1.40	97.30
3	Rio Piedras-Ponce (via Fajardo)	499.46	108.1	9,253.42	23,020.15	14,994.66	28.15	37.62	299.00	239.98	139.05	396.77	17,339.41	38.20		12.00	17.50
4	Cayey-Guayama	207.83	26.2	848.40	1,027.19	548.78				60.00	187.38	1,197.43	639.05	323.42			
5	Barrancitas-Humacao (Km. 46 Ramal, Caguas Aguas Buenas Km. 10)	787.36	53.8	5,747.85	3,380.43	6,365.68				622.74		357.01	3,831.12		3.50		39.90
6	Ponce-Arecibo	333.16	82.0	7,809.15	1,281.06	6,889.24				983.12	73.61	673.14	6,488.85	36.45			7.90
7	Caguas-Las Piedras	209.57	22.4		1,489.05	767.43				154.94		782.45	896.46				
8	Agua-dilla-Adjuntas	496.24	53.0	11,179.34	2,549.58	4,052.55	95.60	8.45	211.89	547.79	2.52	62.08	3,912.44	293.39	8.75		
9	Bayamon-Corinto	226.85	27.0	941.45	1,834.92	551.48				211.85		323.40	2,062.60	10.50			
10	Toa Alta-Corozal	342.32	21.9	973.20	2,929.14	1,308.17				262.40	4.17	805.55	986.03		3.00		
11	Manati-Juana Diaz (via Ciales)	571.23	34.0	2,950.50	408.83	1,416.14		28.00		63.70	14.40		2,519.11	19.64			
12	Mayaguez-Arecibo (via Las Marias)	360.24	53.0	9,079.36	508.20	4,435.49				343.04	303.67	203.45	3,238.39	186.87	21.75		
13	Consumo-Maricao	328.79	11.3	678.12	790.00	179.75				420.79	63.40	270.41	678.68				
14	Adjuntas-Albionito (via Barros)	290.00	48.3	5,924.42	421.37	1,951.60				143.17	49.32	227.98	3,262.32			3.00	
15	Yauco-Lares	188.28	15.2		330.00	261.20	112.94	31.66	15.00	210.27		566.48	851.86	6.54			
16	Mayaguez-Cabo Rojo	290.94	5.7	693.00	73.70	83.40				44.34		2.00	603.56				
17	San German-Guamaca	119.81	9.5		120.00	83.20				126.00		30.80	558.20				
18	La Plata-Naranjito-Camp Morovis	225.10	17.7	787.35	611.11	1,635.50						21.40	1,493.50			6.00	
19	Coamo-Santa Ysabel	943.16	5.0									24.00	217.38				
20	Las Cruces-Cidra	267.46	8.2		42.00	1,364.08						76.26	456.00				

EXHIBIT No. 33.—Expenditures for maintenance of insular roads during year ended June 30, 1919—Continued.

Road No.	Description.	General average.	Length maintained.	Class of work.										Equipment.		
				Broken stone.			Re-new-ing wear-ing sur-face.	Ditches, should-ers, and side slopes.		Remov-ing land-slides.	Caminoes work.			Ma-chin-ery, pur-chase and re-pairs.	Tools, pur-chase and re-pairs.	Mis-cel-lane-ous, pur-chase and re-pairs.
				Furnishing.		Placing.		Con-struction and regrad-ing.	Clean-ing.		Repair-ing pits and re- storing and top blinder.	Remov-ing obstruc- tion in ditches and opening drain.				
				Contract.	Admini- stration.											
23	Ramal Trujillo-Alto.....	\$326.16	Km. 6.0		\$300.00	\$46.44	\$30.60			\$200.00	\$150.00	\$125.00	75.00	\$58.78		
	Ramal Lolla.....	464.14	7.0		613.70	902.80								586.67		
	Ramal Guayanilla.....	381.74	1.0		70.00	36.24										
	Ramal Cabo-Rojó-San Ger- man.....	462.60	7.0	\$2,099.84	191.40	236.60						8.30		592.10		
	Ramal Anasco-San Sebastian.....	240.53	6.0	795.00	20.00	27.72					29.00	77.72	19.67	373.08		
	Ramal Mayaguez-Maricao.....	416.70	21.2	3,724.00	1,199.00	1,191.23					643.02	212.50	450.58	974.90	\$98.21	
	Ramal Mayaguez Correcional.....	809.80	3.8		183.50	234.00	114.90	\$81.61	1.60			42.18	1.67	307.86	.75	
	Ramal Florida.....	87.87	10.0											608.66		
	Ramal Naguabo-Juncos.....	315.78	12.0		1,013.72	509.98	15.00				111.70	34.82	33.38	788.68	13.50	
	Ramal Cataño-Guaymabo.....	894.22	9.0	1,080.00	612.01	463.18							899.24	846.62		
	Ramal Cataño-Bayamon.....	1,313.70	7.0	762.68		354.96							30.90	646.62		
	Ramal Vega Baja-Morovis.....	509.85	12.0	1,668.52		941.96	62.08		16.80					864.58		
	Ramal Bayamon-Tosa Alta.....	325.78	4.3		1,099.92	300.92										
	Ramal Fajardo-Playa.....	422.74	4.0		1,080.96	600.00										
	Viques.....	1,210.78	7.0		3,087.58	3,267.68										
	Total.....	588.66	1,202.2	109,941.57	86,648.26	96,366.64	463.57	1,365.78	1,027.12	5,602.61	3,067.80	9,882.97	87,990.78	1,305.06	\$854.90	\$190.50

Road No.	Description.	Class of work.				Class of service.							Total expenditures.				
		Bridges and culverts.		Retain- ing and protection walls, con- struction and repairs.	Road houses.		Reloca- tion and raising of roads subject to floods.	Labor and super- intendence.		Supplies.		Hauling.					
		Con- struction.	Recon- struction.		Com- struction.	Re- pairs.		Asphalt and screenings.	Inspe- tion.	Free.	Convict.			Materials.	General.		For con- victs.
1	San Juan-Ponce.....	\$228.77	\$1,399.35	\$1,458.22	\$234.45		\$3,494.77	\$22,451.42	\$287.75	\$1,911.34	\$33,667.91	\$5,653.90	\$36,369.50	\$3,722.02	\$3,495.13	\$85,213.48	\$91,126.94
2	Santurce-Ponce (via Mayaguez).....																
3	Rio Piedras-Ponce (via Fajardo).....	3,831.33	810.81	2,025.68	8.04		160.00	145.21	5,514.96	4,181.45	56,141.22	1,101.66	46,049.09	5,116.10	283.36	6,420.79	115,122.22
4	Cayey-Guayama.....	14,490.58	1,296.40	3,110.17	479.18		478.51	316.20	207.53	2,783.25	44,707.34	2,397.95	3,730.39	283.63	10,814.96	88,944.72	94,448.72
5	Barraquitas - Humacao (km. 46 Ramal, Caguas Aguas Buenas km. 10).....									292.50	3,663.64	376.02	886.60	238.41		280.38	5,445.05
6	Ponce-Arecibo.....	20,715.27		251.09	47.50		16.00			982.00	11,781.69	792.68	26,275.99	901.79	777.86	1,830.28	42,390.09
7	Caguas-Las Piedras.....	129.60		113.54	1,370.80					1,610.00	15,546.86	884.55	7,453.17	1,277.54	980.76	1,176.68	27,319.56
8	Aguadilla-Adjuntas.....	125.00		35.23				12.65		468.00	3,609.84		1.60	128.52		961.25	4,701.21
9	Bayamon-Corriento.....	77.33		91.68			8.24			1,268.33	10,267.74		13,094.38	542.56		435.40	24,340.06
10	Toca Alta-Corozal.....								1.00	270.00	4,011.57		2,094.55	94.08		6.00	6,206.20
11	Manati-Juana Diaz (via Chiles).....			38.26						537.00	5,099.75		2,086.71	196.96		113.50	7,896.92
13	Mayaguez-Arecibo (via Las Marias).....	8,615.78		2,508.97						783.75	5,984.13		13,078.67	173.49		185.55	19,421.82
14	Consumo-Maricao.....	154.00		38.07					3.48	730.00	9,081.56		8,294.40	1,071.73		645.08	19,092.77
15	Adjuntas - Albemito (via Barros).....			4.00	110.23					300.00	2,034.40		1,591.96			49.00	3,655.38
16	Yauco-Lares.....			792.49	250.56				55.60	926.17	6,659.91		6,669.12	5.13		675.79	14,093.00
18	Mayaguez-Cabo Rojo.....									476.00	2,428.93		350.00	3.86		79.16	2,961.95
19	San German-Guanica.....			82.80						135.00	938.80		663.00			36.00	1,657.80
20	La Plata-Naranjito-Campo Morovis.....									220.00	988.20		120.00			30.00	1,138.20
21	Coamo-Santa Ysabel.....			2.50						486.00	3,943.51		875.86	58.40		105.59	4,983.36
22	Las Cruces-Cidra.....			10.20						220.00	471.58						471.58
23	Ramal Trujillo-Alto-Ramal Loiza.....			14.86						240.00	1,765.64		96	297.95		98.75	2,193.20
	Ramal Guayanilla.....			196.64					50.00	197.50	870.72		1,083.24			4.00	1,957.96
	Ramal Cabo-Rojo-San German.....	893.63	7.00					10.00		266.17	1,154.39	386.45	499.28	4.28	1,036.07	169.50	3,248.97
	Ramal Anasco-San Sebastian.....									272.50	311.74		70.00				381.74
										110.00	901.80		2,099.84	217.00		19.60	3,238.24
										100.00	647.19		796.00				1,443.19

EXHIBIT No. 33.—Expenditures for maintenance of insular roads during year ended June 30, 1919—Continued.

Road No.	Description.	Class of work.					Class of service.						Total expenditures.			
		Bridges and culverts.		Retain- ing and protec- tion walls, con- struc- tion and repairs.	Road houses.		Asphalt and screen- ings.	Reloca- tion and raising of roads subject to floods.	Inspection.	Labor and super- intendence.		Supplies.				
		Con- struc- tion.	Re- pairs.		Re- con- struction.	Re- pairs.				Free.	Convict.	Materials.		General.	For con- victs.	
	Ramal Mayaguez-Morovis.....	\$36.76						\$4.00	\$300.00	\$3,026.49		\$4,443.40	\$35.00		\$429.10	
	Ramal Mayaguez Correcional.....		\$2,084.15						100.00	1,490.22		1,363.93			223.10	
	Ramal Florida.....								270.00	878.66					878.66	
	Ramal Naguabo-Juncos.....	626.67			\$372.94		\$36.47		262.50	3,063.98		223.88			490.50	
	Ramal Catiao-Guaynabo.....								180.00	3,722.57	\$27.15	2,943.83	56.56		262.88	
	Ramal Catiao-Bayamon.....	4,092.03	693.43		58.10				180.00	4,800.06	11.75	2,005.34	494.73	\$68.06	145.69	
	Ramal Vega Baja-Morovis.....	12.00			6,118.51				180.02	1,964.80		3,914.95	163.00		75.48	
	Ramal Bayamon-Torres.....	2,512.23			12.00										6,118.23	
	Ramal Fajardo-Playa Alta.....									132.72	70.20	392.96		795.96	1,400.84	
	Ramal Fajardo-Playa Vieques.....	2,220.00								1,000.00		690.95			1,690.95	
										3,330.97		1,800.77	8.86	3,003.56	8,475.16	
	Total.....	58,704.98	\$3,411.17	431.95	\$2,506.76		4,173.42	23,971.95	6,104.31	21,229.58	103.43	12,046.21	216,884.28	18,528.41	10,724.39	\$43,263.18

General expenses:

Office force.	\$16,104.92
Overseers and assistants.	22,666.83
Store house clerk.	1,400.00
Master mechanic.	1,632.67
Travelling.	28,240.97
Equipment.	32,031.96
Live stock.	4,033.82
Office supplies, etc.	2,266.13
Grand total.	104,339.80
	647,875.97

Character of work.	Averages.										Percentage of total cost.					
	1912	1913	1914	1915	1916	1917	1918	1919	1912	1913	1914	1915	1916	1917	1918	1919
Public meters broken stone delivered per kilometer	64.87	81.23	93.58	75.12	65.10	93.90	106.90	96.01	36.16	32.65	47.33	36.01	35.22	34.00	34.82	30.35
Cost per cubic meter	1.63	1.42	1.65	1.32	1.43	1.52	1.72	1.70	20.17	18.44	23.46	24.72	22.07	18.60	12.50	15.16
Public meter broken stone placed per kilometer	68.21	82.11	97.68	77.67	74.60	84.75	85.50	105.62	11.39	11.45	8.58	9.08	10.58	8.03	9.76	10.63
Cost of placing per cubic meter	34.12	40.57	30.13	24.88	27.95	34.75	51.52	60.19	4.98	7.85	3.66	3.67	3.61	6.67	7.42	5.52
Cost of inspection and overseeing per kilometer	25.69	27.81	12.94	9.81	9.52	30.50	39.14	28.67	12.36	8.60	9.37	3.81	1.65	9.85	8.90	3.01
Cost of machinery and tools per kilometer	377.98	523.81	137.97	299.32	163.14	165.36	257.10	601.52	5.72	5.90	4.46	6.75	7.47	5.24	2.60	3.54
Cost of spreading tarvia per kilometer	37.30	30.53	32.76	35.10	39.45	85.15	85.00	92.11	2.73	3.96	2.22	2.55	2.99	3.89	2.18	3.10
Cost of cleaning per kilometer	11.25	20.91	15.72	15.79	19.76	21.05	13.72	19.69	7.67	7.67	.....	.....	.....	.....	.....	.....
Cost of repair of bridges per kilometer	8.28	8.64	6.69	6.99	7.91	17.66	11.53	2.04	.....	.....	.....	.....	.....	.....	.....	.....
Cost of miscellaneous per kilometer	.....	27.23	7.85	4.72	3.92	2.08	2.45	3.33	.....	.....	.....	1.72	1.48	.....	1.07	1.57
Cost of live stock, carts, harness, etc., per kilometer	.....	.....	.....	.....	.....	7.01	5.65	10.40	.....	.....	.....	.....	.....	2.32	1.82	.....
Cost of office force per kilometer	.....	.....	.....	.....	.....	1.06	64.65	48.82	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Cost of new construction per kilometer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total cost.		Cost per kilometer.		Fiscal year.				Kilometers maintained.		Total cost.		Cost per kilometer.			
	Kilometers maintained.															
1902-3	445.1	\$176,780.00	\$397.00	1911-12								991.5	\$301,870.00	\$301.42		
1903-4	518.2	193,740.00	374.00	1912-13								1,080.0	332,065.00	313.26		
1904-5	662.0	193,021.00	292.00	1913-14								1,067.7	374,725.00	331.50		
1905-6	690.0	137,200.00	201.50	1914-15								1,107.2	299,980.00	281.91		
1906-7	790.0	206,574.00	261.50	1915-16								1,126.9	297,721.00	284.19		
1907-8	813.0	246,367.00	303.00	1916-17								1,138.3	516,581.00	453.81		
1908-9	900.6	298,852.00	331.84	1917-18								1,154.0	608,896.00	537.63		
1909-10	971.6	278,152.00	296.49	1918-19								1,202.2	647,575.07	538.65		
1910-11	974.0	296,943.00	304.96													

Fiscal year.		Fiscal year.		Fiscal year.		Fiscal year.	
Kilometers maintained.	Total cost.	Cost per kilometer.	Kilometers maintained.	Total cost.	Cost per kilometer.	Kilometers maintained.	Total cost.
1902-3.....	445.1	\$176,780.00	\$397.00	1911-12.....	991.5	\$301,870.00	\$301.42
1903-4.....	518.2	193,740.00	374.00	1912-13.....	1,060.0	332,055.00	313.26
1904-5.....	662.0	193,021.00	292.00	1913-14.....	1,067.7	374,725.00	331.60
1905-6.....	680.0	137,200.00	201.50	1914-15.....	1,107.2	299,969.00	281.91
1906-7.....	790.0	206,574.00	261.50	1915-16.....	1,126.9	297,721.00	264.19
1907-8.....	813.0	246,367.00	303.00	1916-17.....	1,138.3	516,581.00	453.81
1908-9.....	900.6	298,852.00	331.84	1917-18.....	1,154.0	608,896.00	527.63
1909-10.....	971.6	278,152.00	296.49	1918-19.....	1,202.2	647,575.07	538.65
1910-11.....	974.0	266,943.00	304.86				

EXHIBIT NO. 35.—*Collections at the several ports of the island during the fiscal year 1918-19.*

CAPTAINS OF THE PORTS.

	Aguadilla.	Arecibo.	Arroyo.	Fajardo.	Guánica.	Guayanilla.	Humacao.	Mayaguez.	Ponce.	San Juan.	Vieques.	Total.
1918.												
July.....	\$167.39	\$9.26	\$128.22	\$223.70	\$402.68	\$69.79	\$371.94	\$559.27	\$769.89	\$1,901.42	.....	\$4,593.65
August.....	36.49	5.09	66.78	71.43	35.31	9.26	182.85	194.37	920.90	1,761.48	.....	3,283.96
September.....	75.68	85.43	58.34	63.48	429.44	3.75	24.56	218.29	825.10	1,940.58	.....	3,462.42
October.....	57.37	3.40	39.25	90.47	311.80	.....	60.34	198.32	365.11	1,358.11	\$37.77	2,496.18
November.....	15.25	5.09	20.32	9.29	81.17	.....	357.69	137.91	669.35	1,350.78	44.01	2,661.32
December.....	53.62	5.09	65.55	27.83	144.16	.....	118.25	197.18	520.65	1,379.51	14.47	2,511.84
1919.												
January.....	142.65	4.71	248.89	191.60	1,075.66	70.73	247.53	220.07	892.93	2,425.64	141.25	5,661.69
February.....	70.78	8.31	74.84	94.79	516.75	13.16	66.19	580.57	826.58	2,615.82	41.45	4,908.27
March.....	50.23	82.91	102.10	51.54	358.93	6.27	69.55	351.04	854.71	3,022.95	48.33	4,968.64
April.....	44.31	5.01	85.53	65.99	1,238.65	12.75	83.02	212.80	909.46	2,463.99	21.16	4,832.65
May.....	45.39	30.27	68.75	78.00	517.02	17.08	46.05	227.71	457.02	2,182.02	10.17	3,677.38
June.....	93.94	35.11	146.46	27.08	434.59	.....	70.50	163.36	865.08	1,562.46	.....	3,428.58
Total.....	853.00	279.91	1,105.03	993.19	5,536.16	202.79	1,698.47	3,261.89	8,256.78	23,994.76	358.61	46,510.58

EXHIBIT No. 36.—Total cash receipts and expenditures, insular telegraph, for the year ending June 30, 1919.

TELEGRAPH.

Month.	Number of paid messages.	Earnings.	Maintenance and operation.	Profits.	Losses.
July.....	17,714	\$5,566.85	\$1,294.40	\$4,272.45	.....
August.....	15,055	5,128.15	4,608.33	429.82	.....
September.....	15,944	4,944.31	5,209.00	.....	\$264.69
October.....	24,004	8,353.90	4,964.35	3,389.55	.....
November.....	23,128	8,043.01	4,314.74	3,728.27	.....
December.....	20,670	7,171.55	7,728.48	.....	556.93
January.....	17,201	5,688.77	2,361.22	3,327.55	.....
February.....	14,875	4,472.98	9,550.50	.....	5,077.52
March.....	17,921	5,499.99	7,917.29	.....	2,417.30
April.....	17,022	5,362.14	4,992.09	370.05	.....
May.....	19,941	6,328.76	5,070.28	1,258.48	.....
June.....	19,070	6,059.16	8,760.41	.....	2,691.25
Total.....	222,635	72,619.67	66,861.09	16,776.17	11,007.59

TELEPHONE.

Month.	Number of paid messages.	Tolls.	Rentals.	Total.	Maintenance and operation.	Profits.	Losses.
July.....	7,456	\$2,444.92	\$806.18	\$3,251.10	\$647.20	\$2,603.90	.....
August.....	7,603	2,640.55	809.38	3,449.93	2,349.16	1,100.77	.....
September.....	7,183	2,199.08	809.28	3,008.36	2,604.51	403.85	.....
October.....	7,567	2,282.98	806.38	3,089.36	2,482.17	607.19	.....
November.....	7,075	2,027.24	812.11	2,839.35	2,157.37	681.98	.....
December.....	7,434	2,122.28	809.10	2,931.38	3,864.25	.....	\$632.87
January.....	7,877	2,369.94	858.24	3,228.18	1,180.61	2,047.57	.....
February.....	6,595	1,778.92	848.94	2,625.86	4,775.25	.....	2,149.39
March.....	7,054	2,105.53	872.04	2,977.57	3,958.65	.....	981.08
April.....	6,352	1,313.09	875.78	2,188.87	2,496.04	.....	307.17
May.....	8,241	2,344.72	895.38	3,240.10	2,535.14	704.96	.....
June.....	8,754	3,244.15	897.38	4,141.53	4,375.21	.....	233.68
Total.....	89,281	26,873.40	10,098.19	36,971.59	33,425.56	8,150.22	4,604.19

COMBINED.

Month.	Number of free messages.	Total number of messages.	Earnings.	Maintenance and operation.	Profits.	Losses.	Deficit and surplus.
July.....	2,285	27,455	\$8,817.95	\$1,941.60	\$6,876.35	.....	\$6,876.35
August.....	1,743	24,491	8,578.08	7,047.49	1,530.59	.....	1,530.59
September.....	1,285	24,412	7,952.67	7,813.51	403.85	\$264.69	139.16
October.....	1,646	33,307	11,443.26	7,446.52	3,996.74	.....	3,996.74
November.....	1,635	31,838	10,882.36	6,472.11	4,410.25	.....	4,410.25
December.....	1,229	29,333	10,103.03	11,592.73	.....	1,489.70	1,489.70
January.....	1,619	26,697	8,916.95	3,541.53	5,375.12	.....	5,375.12
February.....	6,451	27,921	7,098.84	14,325.75	.....	7,226.91	17,226.91
March.....	7,000	32,575	8,477.56	11,875.94	.....	3,398.38	13,398.38
April.....	309	23,743	7,551.01	7,488.13	370.05	307.17	62.88
May.....	9,499	37,671	9,568.86	7,605.42	1,963.44	.....	1,963.44
June.....	2,651	30,475	10,200.69	13,125.62	.....	2,924.93	2,924.93
Total.....	38,002	349,918	109,591.26	100,276.65	24,926.39	15,611.78	* 9,314.61

¹ Deficit.

² Surplus.

EXHIBIT No. 37.—Statement, by stations, showing receipts and operating expenses, bureau of insular telegraph, for the year ending June 30, 1919.

Stations.	Line receipts.			Expenditures.				Profits.	Losses.
	Cash.	Value of half-rate.	Value of free.	Total.	Salaries.	Rent.	Light.	Total.	
Adjuntas.	\$1,063.24	\$10.46	\$14.90	\$1,118.60	\$674.67			\$804.60	\$314.00
Aguada.	64.74		22.87	87.61	1,278.42	\$88.66		54.14	33.47
Aguadilla.	1,477.94	66.53	15.17	1,559.64	360.00		\$11.90	397.83	327.17
Agua Buenas.	724.18	33.92		772.08	1,099.67	120.00	6.90	443.89	328.19
Albionito.	2,032.46	33.92	34.51	2,100.89	1,099.67		6.30	233.04	641.88
Anasco.	328.64	10.40	13.97	353.01	452.00	37.12	6.75	107.33	603.20
Arecibo.	2,003.46	126.73	115.03	2,245.22	1,297.17	216.00	19.20	1,906.50	341.72
Arroyo.	558.49		10.38	568.87	549.33	72.00		713.19	144.32
Barceloneta.	226.07		31.94	258.01	528.27		14.40	111.80	396.46
Barranquitas.	811.04	11.85	21.33	845.12	597.34	72.00	3.25	89.50	172.41
Barros.	624.01	12.13	2.37	638.51	577.34	60.00	12.00	101.58	810.92
Bayamon.	611.14	32.72	57.62	701.48	599.66	58.33	8.82	90.58	757.39
Cabo Rojo.	389.65	10.83	18.82	419.30	599.32		11.00	96.87	706.19
Caguas.	10,549.22	25.69	38.42	10,613.33	2,748.83	360.00	54.75	3,901.75	6,711.58
Camuy.	275.79		62.62	338.41	600.00	72.00	5.80	738.17	405.67
Carolina.	182.78	4.60	69.21	256.59	600.00	30.00		66.00	439.41
Cataño.	141.99		1.30	143.29				86.15	57.14
Caye.	5,674.80	34.31	615.50	6,324.61	1,530.99	120.00	17.50	2,255.03	4,089.58
Cabes.	106.44	2.96	11.71	121.11	840.00	96.00		1,072.35	951.24
Ciales.	325.04	2.38		327.42	600.67		7.60	131.55	359.54
Gidra.	710.43	8.41	21.86	740.70	360.00		8.15	73.60	
Coamo.	837.85	18.71	38.47	895.03	539.00	60.00	4.85	90.77	485.69
Comerio.	812.46			812.46	347.00	60.00	6.00	77.61	490.61
Corozal.	824.82		2.26	827.08	250.33	60.00	4.55	386.21	440.87
Dorado.	75.73			75.73				45.78	30.95
Encarnada.	989.18	4.21	4.81	998.20	567.33	60.00		821.36	144.03
Fajardo.	1,068.35	37.07	57.64	1,163.06	840.00	72.00	13.55	1,099.40	137.24
Guayama.	24.16	103.72	1,813.70	1,941.58	839.67	132.83	12.75	1,211.04	602.66
Guayandilla.	211.97		35.47	247.44				97.22	150.22
Guaynabo.	335.64			335.64	318.34	60.00	9.15	494.49	145.85
Guarabo.	1,485.04	5.26		1,490.30	735.77		20.40	921.30	567.00
Hatillo.	123.39			123.39				166.13	70.67
Hormigueros.	55.69			55.69				70.67	53.72
Humacao.	65.09			65.09				33.83	31.66
Isabela.	1,042.61	52.72	16.02	1,111.35	721.00		31.35	878.40	232.85
Jayuya.	442.44			442.44	563.83		6.20	126.05	720.51
Jayuya Diaz.	666.34	12.81	28.79	707.94	301.33		6.15	120.98	429.89
Juncos.	249.37	24.00	11.52	285.19	600.00	68.80	10.40	67.19	736.19
Lajas.	2,613.88	4.67	78.61	2,697.16	1,147.00	96.00	25.80	260.31	1,665.35
Lajas.	106.		6.96	112.94				61.43	51.41

	692.12	9.45	29.84	130.53	953.00	92.10	19.20	75.70	720.90	159.36
Leaves.....	360.55	0.15	2.81	180.23	330.00	67.00	8.00	35.22	336.44	25.24
Las Marias.....	360.55	1.18	1.18	361.68	220.22	67.00	8.00	35.22	336.44	25.24
Las Piedras.....	101.20		7.70	101.90				84.62	86.62	44.09
Lota.....	46.10		5.11	51.21				106.17	821.37	149.13
Luquillo.....	648.00	6.61	210.85	865.46	600.00	108.00	7.20	58.05	317.38	407.43
Manati.....	238.26	1.26		239.52	320.00			70.51	711.61	113.86
Maunabo.....	221.04		22.14	243.18	386.66	48.00	10.60	64.58	3,965.86	36.56
Mogana.....	107.28	10.86	33.88	152.02	200.00	45.00	73.56	57.53	285.88	187.52
Morovis.....	398.76	3.85	28.76	431.37	320.00	48.00	9.28	66.56	379.23	229.47
Naguabo.....	313.96	5.57	150.93	470.46	533.33		1.60	75.05	603.66	222.45
Narajuto.....	150.76		150.76	150.76	320.00		6.00	34.33	61.79	73.40
Patillas.....	307.86		133.35	441.21	573.33		6.00	112.72	2,679.37	73.61
Petuelas.....	135.19		135.19	135.19	4,844.97	387.10	100.02	1,108.39	6,501.48	106.89
Ponce.....	8,985.85	126.32	169.68	9,186.33	557.10	9.00	4.40	81.51	674.09	148.92
Quebradillas.....	169.71		16.52	186.23	533.00	144.00		105.66	782.66	137.52
Rincon.....	213.71	16.30	36.71	266.72	600.00		8.40	81.21	785.61	359.95
Rio Grande.....	892.19	25.09	14.30	931.58	14,326.66	280.00	542.81	3,032.71	18,159.11	24,202.07
Rio Piedras.....	245.13		7.03	252.16	600.00		6.70	97.71	773.42	205.85
Sabana Grande.....	266.85	3.82	33.45	304.12	550.66		4.45	71.35	732.22	514.54
San German.....	609.08	16.22	62.62	687.92	14,326.66	280.00	542.81	3,032.71	18,159.11	24,202.07
San Juan.....	29,690.97	6,189.73	6,510.48	42,361.18	601.33	70.83	13.20	67.67	68.67	39.18
San Lorenzo.....	1,025.77	4.68	16.57	1,047.92	599.67	48.00		67.86	67.86	45.20
San Sebastian.....	547.45		10.23	558.67				40.04	40.04	14.44
Santa Isabel.....	207.45		12.39	219.84				77.97	77.97	45.24
Toca Alta.....	105.85		37.13	142.98	599.66	96.00	19.20	131.30	846.16	410.68
Toca Baja.....	100.67		1.22	101.89	600.00	60.00	6.40	73.86	740.26	261.98
Trujillo Alto.....	54.48		64.53	119.01	840.00	72.00	7.30	165.57	1,114.87	135.95
Urzueo.....	421.60	3.50	7.28	428.88				21.49	21.49	13.28
Vega Alta.....	404.96		3.50	408.46	570.67	96.00	10.05	76.94	733.66	15.85
Vega Baja.....	968.17		72.54	1,040.71	600.00	96.00	47.40	104.28	807.68	11,268.67
Vieques.....	34.77	30.28	57.45	796.81	8,278.89			2,989.78	11,268.67	1,748.33
Villalba.....	666.09	17.01		683.64	1,748.33			10,899.60	1,748.33	10,899.60
Yabucoa.....	879.13			883.64				1,099.78		57,880.98
Yauco.....										
General office.....										
Relief operators.....										
Porto Rico Telephone Co.....	10,899.60			10,899.60						
Miscellaneous.....	1,099.78			1,099.78						
Total.....	109,591.26	7,350.49	9,341.39	126,283.14	67,733.26	3,994.27	1,278.80	16,703.40	89,709.73	21,307.57

Poles, line wire, insulation, instruments, miscellaneous, etc.
Salaries, rent, light, stationery, traveling expenses, etc.
Reconstruction and extension.

Total expenditures.....	\$10,586.92
Total earnings.....	89,709.73
Difference.....	10,449.22
Total expenditures.....	110,726.87
Total earnings.....	126,283.14
Difference.....	16,557.27

EXHIBIT No. 38.—*Porto Rico irrigation service—Financial statement, June 30, 1919.*

ASSETS.

Investment accounts:		
Construction expenditures.....		\$4,132,752.69
Construction equipment.....	\$68,467.11	
Less depreciation charged off.....	38,518.71	
	29,948.40	
Supplies construction.....	44,739.84	
Total value equipment and supplies on hand.....		74,688.24
		4,207,440.93
Less items in suspense.....		488.11
Total expenditures on construction to date.....		4,206,952.82
Interest on bonds to June 30, 1919.....		1,708,546.72
Interest payable on temporary loan, insular government.....		4,723.22
Discount on bonds.....		48,260.60
Operation, during construction:		
Eastern division.....	5,896.28	
Western division.....	9,939.28	
		15,825.66
Plant:		
Irrigation system—		
Guamani Canal.....	1,120.72	
Juana Diaz Canal.....	1,345.06	
Pumping stations.....	450.00	
Hydroelectric system—		
Power plant.....	681.80	
Substations.....	494.33	
Transmission lines.....	3,645.80	
Distribution lines.....	37,920.37	
General headquarters—		
Guayama office.....	512.60	
Juana Diaz office.....	202.99	
Telephone lines.....	8.55	
Corral.....	1,002.33	
Garage.....	507.61	
Construction division.....	3.75	
		47,993.99
Maintenance repairs:		
Irrigation system—		
Patillas reservoir.....	2,106.85	
Carite dam.....	3,598.62	
Melania reservoir.....	137.43	
Guamani Canal.....	14,871.29	
Carite Tunnel.....	25.95	
Patillas Canal.....	45,790.37	
Coamo Reservoir.....	1,109.21	
Toro Negro Diversion.....	18.62	
Guayabal Reservoir.....	1,497.48	
Juana Diaz Canal.....	28,133.31	
Hydroelectric system—		
Power plant.....	7,127.44	
Substations.....	238.37	
Transmission lines.....	712.37	
Distribution lines.....	2,146.74	
General headquarters—		
Guayama office.....	457.76	
Juana Diaz office.....	271.80	
		108,240.70
Maintenance improvements:		
Irrigation system—		
Patillas Dam.....	1,650.70	
Guamani Canal.....	10,545.71	
Patillas Canal.....	17,708.76	
Coamo Reservoir.....	924.53	
Guayabal Reservoir.....	160.87	
Juana Diaz Canal.....	5,937.81	
Hydroelectric system—		
Power plant.....	833.60	
Substations.....	175.05	
Transmission lines.....	117.85	
Distribution lines.....	87.25	
General headquarters—		
Guayama office.....	112.62	
Juana Diaz office.....	806.69	
Garage.....	937.87	
		40,068.31
Operation:		
Irrigation system—		
Eastern division.....	81,977.27	
Western division.....	41,727.49	
		123,704.76

Operation—Continued.

Hydroelectric system—			
Power plant.....	\$41,275.79		
Substations.....	8,060.15		
Transmission lines.....	3,834.77		
Distribution lines.....	3,293.75		
		\$56,464.46	
General headquarters.....		35,323.84	
Administration.....		125,774.71	
Stores.....		21,547.07	
Total expenditures.....			\$6,538,435.76
Working accounts:			
Cash in hand of treasurer, San Juan.....	69,155.77		
Accounts collectible.....	14,743.48		
Tax levy.....	\$362,851.54		
Less taxes collected.....	358,865.76		
	3,985.78	87,885.03	
Less—			
Vouchers payable.....	660.47		
Unpaid labor.....	158.69		
Accrued expenses.....	1,303.32		
		2,122.48	
Total balance available for expenditures—			
Construction fund.....		17,099.26	
Operation and maintenance fund.....		47,084.51	
Development and extension of water-power fund.....		21,628.78	
			85,762.55
			<u>6,624,198.31</u>

LIABILITIES.

Investment accounts:

Bond issue—			
Series of 1909.....	3,000,000.00		
Series of 1913.....	1,000,000.00		
Series of 1914.....	1,100,000.00		
Series of 1915.....	400,000.00		
Series of 1916.....	200,000.00		
Series of 1918.....	117,000.00		
		5,817,000.00	
Bonds paid—			
Jan. 1, 1914.....	150,000.00		
Jan. 1, 1915.....	150,000.00		
Jan. 1, 1916.....	150,000.00		
Jan. 1, 1917.....	150,000.00		
Jan. 1, 1918.....	150,000.00		
Jan. 1, 1919.....	150,000.00		
		900,000.00	
			4,917,000.00
Premium on bonds.....		17,965.46	
Interest on bank balances.....		230,664.98	
Receipts during construction:			
Eastern division.....		55,887.75	
Western division.....		34,662.20	
Irrigation revenues.....		1,164,420.33	
Miscellaneous irrigation revenues.....		3,804.04	
Hydroelectric current revenues.....		195,051.09	
Miscellaneous hydroelectric revenues.....		1,620.69	
Donation by Manuel Gonzales y Martinez.....		2,521.20	
Surplus, irrigation system.....		.57	
			1,707,198.31
Total.....			<u>6,624,198.31</u>

EXHIBIT No. 39.—*Porto Rico irrigation service—Statement of net charges to features during the fiscal year July 1, 1918–June 30, 1919.*

Features.	Total to June 30, 1918.	Total, July 1, 1918 to June 30, 1919.	Total to June 30, 1919.
Construction:			
Patillas Dam.....	\$1,125,351.91	\$1,671.21	\$1,127,023.12
Patillas Canal.....	385,769.19	101.90	385,871.09
Patillas lateral canal and outlets.....	27,655.48		27,655.48
Carite Dam.....	271,854.89	12.00	271,842.89
Carite Tunnel.....	66,853.19		66,853.19
Carite water power.....	326,461.62	1168.51	326,293.11
Guamaní Canal.....	112,232.32	183.59	112,415.91
Toro Negro diversion.....	130,442.28		130,442.28
Guayabal Dam.....	642,139.65	185.66	642,053.99
Juana Diaz lateral canals and outlets.....	39,930.08		39,930.08
General administration.....	337,471.74	654.82	338,126.56
Juana Diaz Canal.....	325,596.22	1632.91	324,963.31
Melania Reservoir.....	43,279.17		43,279.17
Hydrographic division.....	74,305.49		74,305.49
Coamo Dam.....	296,394.94	1497.79	296,997.15

EXHIBIT No. 39.—*Porto Rico irrigation service—Statement of net charges to features during the fiscal year July 1, 1918–June 30, 1919—Continued.*

Features.	Total to June 30, 1918.	Total July 1, 1918, to June 30, 1919.	Total to June 30, 1919.
Plant:			
Irrigation system—			
Guamani Canal.....	\$1,129.72		\$1,129.72
Juana Diaz Canal.....	1,345.06		1,345.06
Pumping stations.....		\$450.00	450.00
Hydroelectric system—			
Power plant.....	354.90	326.99	681.89
Substations.....		484.33	484.33
Transmission lines.....		3,645.89	3,645.89
Distribution lines.....	14,399.16	28,630.21	37,929.37
General headquarters—			
Guayama office.....	212.88	299.72	512.60
Juana Diaz office.....		292.99	292.99
Telephone lines.....	7.30	1.25	8.55
Corral.....	285.61	716.72	1,002.33
Garage.....	496.63	10.88	507.51
Construction division.....	3.76		3.76
Maintenance repairs:			
Irrigation system—			
Patillas Reservoir.....	1,330.11	775.74	2,105.85
Carite Dam.....	3,596.62		3,596.62
Melania Reservoir.....	65.58	71.85	137.43
Guamani Canal.....	9,271.60	5,699.69	14,971.29
Carite Tunnel.....	11.20	14.75	25.95
Patillas Canal.....	25,380.57	20,415.80	45,796.37
Coamo Reservoir.....	1,109.21		1,109.21
Toro Negro diversion.....	18.62		18.62
Guayabal Reservoir.....	1,292.40	206.08	1,497.48
Juana Diaz Canal.....	15,325.53	12,807.78	28,133.31
Hydroelectric system—			
Power plant.....	4,325.11	2,802.33	7,127.44
Substations.....	193.44	44.93	238.37
Transmission lines.....	509.56	203.81	713.37
Distribution lines.....	475.49	1,671.26	2,146.74
General headquarters—			
Guayama office.....	94.95	362.81	457.76
Juana Diaz office.....	271.89		271.89
Maintenance improvements:			
Irrigation system—			
Patillas Dam.....	1,153.80	505.90	1,659.70
Guamani Canal.....	10,472.81	72.90	10,545.71
Patillas Canal.....	7,160.28	10,548.48	17,708.76
Coamo Reservoir.....	675.79	248.74	924.53
Guayabal Reservoir.....	93.81	67.06	160.87
Juana Diaz Canal.....	4,196.06	1,741.75	5,937.81
Hydroelectric system—			
Power plant.....	85.87	747.73	833.60
Substations.....		175.05	175.05
Transmission lines.....	117.85		117.85
Distribution lines.....	87.25		87.25
General headquarters—			
Guayama office.....	112.62		112.62
Juana Diaz office.....	896.69		896.69
Garage.....		937.87	937.87
Operation:			
Irrigation system—			
Eastern division.....	66,398.76	15,678.51	81,977.27
Western division.....	32,732.94	8,994.55	41,727.49
Hydroelectric system—			
Power plant.....	27,204.11	14,071.68	41,275.79
Substations.....	5,896.08	2,194.07	8,090.15
Transmission lines.....	2,365.25	1,469.52	3,834.77
Distribution lines.....	2,200.69	1,093.06	3,293.75
General headquarters—			
Telephone lines.....	5,085.40	1,121.90	6,207.30
Corral.....	4,782.63	1,806.12	6,588.75
Garage.....	1,503.76	1,189.58	2,693.34
Construction division.....	26,029.84	15,674.89	41,704.73
Administration—General headquarters:			
Executive division.....	72,984.81	18,244.80	91,229.61
Engineering division.....	18,076.16	2,789.85	20,866.01
Accounting division.....	8,731.08	852.21	9,583.29
Property division.....	3,518.38	577.42	4,095.80
Total.....	4,589,749.78	154,782.81	4,744,532.59

¹ Credit balances.

EXHIBIT No. 40.—*Porto Rico irrigation service general balance sheet—Summary of accounts to June 30, 1919.*

	Debits.	Credits.
Construction:		
Patillas Dam	\$1, 127, 023. 12	
Patillas Canal	385, 871. 09	
Patillas lateral canals and outlets	27, 655. 48	
Carite Dam	271, 842. 89	
Carite Tunnel	66, 853. 19	
Carite water power	326, 293. 11	
Guamani Canal	112, 415. 91	
Toro Negro diversion	130, 442. 28	
Guayabal Dam	642, 063. 99	
Juana Diaz lateral canals and outlets	39, 930. 08	
General administration	338, 126. 56	
Juana Diaz Canal	324, 963. 31	
Melania Reservoir	43, 279. 17	
Hydrographic division	74, 305. 49	
Coamo Dam	295, 897. 15	
Premium on bonds		\$8, 559. 50
Interest on bonds	901, 777. 78	
Interest on bank balances		219, 484. 78
Treasurer, San Juan	17, 083. 96	
Unpaid labor		15. 50
Vouchers payable		96. 46
Treasurer, accounts collectible	139. 06	
Accrued expenses		11. 80
Operation during construction—		
Eastern division	5, 886. 38	
Western division	9, 939. 28	
Receipt from operation during construction—		
Eastern division		55, 887. 75
Western division		34, 662. 20
Discount on bonds	38, 612. 50	
Interest payable on temporary loans, insular government	955. 55	
Operation:		
Irrigation system—		
Guamani Canal	1, 129. 72	
Juana Diaz Canal	1, 345. 06	
Pumping stations	450. 00	
Hydroelectric system—		
Power plant	681. 89	
Substations	484. 33	
Transmission lines	3, 645. 89	
Distribution lines	37, 929. 37	
General headquarters—		
Guayama office	512. 60	
Juana Diaz office	292. 99	
Telephone lines	8. 55	
Corral	1, 002. 33	
Garage	507. 51	
Construction division	3. 75	
Maintenance repairs:		
Irrigation system—		
Patillas Reservoir	2, 105. 85	
Carite Dam	3, 598. 62	
Melania Reservoir	137. 43	
Guamani Canal	14, 871. 29	
Carite Tunnel	25. 96	
Patillas Canal	45, 796. 37	
Coamo Reservoir	1, 109. 21	
Toro Negro diversion	18. 62	
Guayabal Reservoir	1, 497. 48	
Juana Diaz Canal	28, 133. 31	
Hydroelectric system—		
Power plant	7, 127. 44	
Substations	238. 37	
Transmission lines	713. 37	
Distribution lines	2, 146. 74	
General headquarters—		
Guayama office	457. 76	
Juana Diaz office	271. 89	
Maintenance improvements:		
Irrigation system—		
Patillas l. am.	1, 669. 70	
Guamani Canal	10, 545. 71	
Patillas Canal	17, 708. 76	
Coamo Reservoir	924. 53	
Guayabal Reservoir	160. 87	
Juana Diaz Canal	5, 937. 81	
Hydroelectric system—		
Power plant	833. 60	
Substations	175. 05	
Transmission lines	117. 85	
Distribution lines	87. 25	

EXHIBIT No. 40:—*Porto Rico irrigation service general balance sheet—Summary of accounts to June 30, 1919—Continued.*

	Debits.	Credits.
Maintenance improvements—Continued.		
General headquarters—		
Guayama office.....	\$112.62	
Juana Diaz office.....	866.69	
Garage.....	937.87	
Operation:		
Irrigation system—		
Eastern division.....	81,977.27	
Western division.....	41,727.49	
Hydroelectric system—		
Power plant.....	41,275.79	
Substations.....	8,060.15	
Transmission lines.....	3,834.77	
Distribution lines.....	3,293.75	
General headquarters—		
Telephone lines.....	6,207.30	
Corral.....	6,087.75	
Garage.....	2,673.34	
Construction division.....	20,355.45	
Administration, general headquarters:		
Executive division.....	91,229.61	
Engineering division.....	20,866.01	
Accounting division.....	9,583.29	
Property division.....	4,096.80	
Tax levy.....	3,985.78	
Treasury.....	30,343.52	
Treasury, development and extension of water power.....	21,728.29	
Accounts receivable.....	14,604.42	
Stores.....	9,014.98	
Stores, Carite water power.....	12,532.09	
Unpaid labor.....		\$143.19
Accounts payable.....		564.01
Accrued expenses.....		1,291.52
Bonded debts.....		4,917,000.00
Surplus, irrigation system.....		.57
Irrigation revenues.....		1,164,420.33
Miscellaneous irrigation revenues.....		3,804.04
Hydroelectric current revenues.....		196,051.09
Miscellaneous hydroelectric revenues.....		1,920.69
Interest on daily bank balances.....		11,180.20
Donation by Manuel González y Martínez.....		2,871.20
Interest on bonds.....	801,768.94	
Other interest.....	3,767.67	
Discount on bonds.....	9,648.00	
Premium on bonds.....		9,405.96
Total.....	6,626,320.79	6,626,320.79

APPENDIX V.

REPORT OF THE TREASURER.

DEPARTMENT OF FINANCE,
OFFICE OF THE TREASURER,
San Juan, P. R., August 20, 1919.

The GOVERNOR OF PORTO RICO,
San Juan, Porto Rico.

SIR: In compliance with your request of July 7, 1919, I have the honor to submit the following report for the fiscal year ending June 30, 1919, covering activities in the department of finance:

GENERAL REMARKS.

Historical review.—I note that the governor wishes to have a review of the different activities and progress that may have been attained during the last two decades of the American administration of Porto Rico. After careful thought, I have come to the conclusion that the best method is to include a last paragraph in this report of the evolution and progress made in the different services of the department, and, as requested, a brief analysis of the present situation as compared with conditions which prevailed during the Spanish régime at the time of the change of government.

General conditions of the department of finance.—The conditions of the department of finance during the fiscal year which has just expired have been quite normal, in a general way, even though there have existed certain circumstances which have affected materially the regular course of official business. In the first place, the earthquakes of 1918, which, aside from the general justified alarm which they caused, had a decided influence upon the business of this department, as 16 of the municipal buildings where collectors' offices were located were either damaged or destroyed, thus making the rental of appropriate private buildings absolutely imperative for their installation. As the current budget of expenses of this department contained no appropriation from which these expenses could be defrayed, it was necessary to apply to the legislature for a special appropriation with which to meet payment of said rentals.

A great portion of the urban property on the west side of the island was the most affected by the earthquakes, and this made the collection of taxes thereon very difficult, and in many instances utterly impossible. In those cases where the owner of the property had no other means from which to effect payment of the tax, the department of finance deemed it advisable not to employ coercive measures for the collection thereof, much less so bearing in mind that the legislature appropriated certain funds for aiding the victims in the reconstruction of their homes, and it would seem to be a paradox that while The People of Porto Rico made donations to certain persons for rebuilding their houses, the treasurer was levying an attachment on the same properties for the collection of a small amount of taxes. A bill was introduced at the last session of the legislature seeking to remit the taxes due on such properties, but it failed of passage. The department is of the opinion that it is advisable to wait until the properties in question are rebuilt, and when the owners thereof derive any benefit therefrom, then to collect the corresponding tax, with the light surcharge provided by law.

Second, comes the influenza epidemic, which played havoc on the island during the same year, 1918, and which also affected the department of finance, a great number of the employees having been taken with the malady. There was a time when the greater number of the collectors of internal revenue of the island were sick, and these were urgently substituted by temporary employees, but as this disease made its appearance suddenly and unexpectedly, it was impossible to find and send immediate substitutes, and thus a few offices had to remain closed for a period of not over five days. As soon as the permanent collectors recovered their health they immediately returned to their duties and conditions in their offices to normal.

The legislature of Porto Rico prolonged its sessions and finally adjourned on July 6, 1919. This circumstance paralyzed certain works in this department, the most important of which was the preparation of the property tax receipts for the present fiscal year of 1919-20. One of the bills, which was discussed until the last minute

before the close of the legislature, was an act to levy an additional tax of fifteen-hundredths of 1 per cent upon the real and personal property of the island, and it was indispensable to await the decision of the legislature for the issuance of the tax receipts. These were therefore prepared and bound, but the amounts left in blank. As soon as the legislature closed and the exact amount of the tax to be imposed was ascertained, work was continued and the receipts were placed in the hands of the respective collectors with all expediency, and this meant quite a considerable amount of work, since the tax receipts for the present fiscal year will reach 133,051. The law prescribes that these receipts should be in the hands of the collectors of internal revenue on the 1st day of July, but this was absolutely impracticable this year for the reasons already given.

There was also introduced at the last session of the legislature an income-tax bill, which was finally approved on June 26, 1919. In accordance with the former act, income-tax returns for the calendar year 1918 had to be filed in the office of the treasurer of Porto Rico on the 1st day of March, 1919. These returns were received by the department, but no tax was fixed and no endeavor made to collect until the law was finally passed by the legislature, as the tax rate was changed thereby. Upon the approval of the act the department of finance proceeded forthwith to assess and collect the income tax, but, naturally, with some delay. However, no other way was open to the department but to await the action of the legislature, as otherwise a conflict would have arisen in levying and collecting the tax in accordance with the former law and subsequently in accordance with the new enactment, with a possible infringement of the fundamental principle that taxation should be made upon an equal basis for all concerned.

As regards corporations, income taxes have only been collected upon those filing their returns for fiscal years ending during the calendar year 1918, and certain amounts withheld at the source. These taxes, however, have to be readjusted according to the new enactment.

New legislation.—Various are the laws approved by our legislature which, in a more or less direct way, affect the department of finance. In the first place, however, we have income-tax act No. 80, approved June 26, 1919, to which reference is made in the immediately preceding paragraph. There were two income-tax laws in force in Porto Rico—the Federal act of 1916, amended in 1917, which imposed a tax upon the income received during the calendar year, and act No. 59, approved by the legislature of Porto Rico on December 4, 1917, levying an income tax upon the income received during the fiscal year; that is to say, we had two different income-tax laws which were applicable during different periods and establishing different tax rates. This meant considerable trouble for the taxpayers, who were obliged to render two income-tax returns during the year and to strike off balances of their operations when it was convenient to the ordinary course of their business. On the other hand, the work of this nature in the department was extraordinary and burdensome, since it had to be considerably repeated during the year.

The two laws in question were merged into one single act, No. 80, already mentioned, and, in reality, no substantial change has been made in the law, the provisions of the former acts having been inserted and slight amendments introduced where experience and local requirements deemed them advisable.

The normal tax for resident individuals and domestic corporations is 3 per cent, and 6 per cent for nonresidents and foreign corporations. The additional tax for individuals is graduated from 1 to 15 per cent upon their net income in excess of \$5,000. The taxpayer who is subject to the maximum rate of 15 per cent, is only subject to the payment of 10.80 per cent on the total amount of his net income.

Corporations are subject to an excess profit tax which is ascertained in accordance with the relation between the amount of capital invested and the amount of the profits obtained, but when the profits do not exceed 10 per cent of the capital invested the corporation is exempted from the payment of the tax. However, when such profits are in excess of 10 per cent on the capital invested, then corporations are subject to the tax in a scale fluctuating between 5 and 30 per cent on their net income in excess of \$10,000.

In addition to the normal tax and surtax already mentioned, there shall be levied, assessed, collected, and paid for each taxable year on the surplus over the net income of every domestic corporation or association, excluding civil partnerships, a tax of 5 per cent.

The amount of said surplus shall be computed by deducting from the total net income the following allowances:

(1) The amount of dividends actually paid out of said net income.

(2) A sum equal to 50 per cent of the net income resulting after the deduction of the dividends.

(3) The amount actually paid out of the net income for the cancellation of the obligations of the corporation or association, outstanding prior to the commencement of the taxable year, but excluding interest on said obligations.

(4) The amount of the normal tax and surtax paid on the total net income.

A new excise tax law has also been approved by the last legislature, which is really a compilation of all former excise tax laws, no substantial change having been made to merit mention. The tax rate on certain specific articles has been increased. The law was approved June 15, 1919, to take effect immediately after approval, and it was therefore necessary to hasten the work of the department for putting it into effect. Some of the taxpayers under this law do not seem to be satisfied with the additional excise tax imposed on them, and some have paid it under protest and resorted to the courts of justice pending decision on the new excise tax. No judicial decision has yet been rendered.

An important change has been made in the organization of the municipalities of the island by virtue of an act approved July 31, 1919, No. 85, establishing a system of local government and reorganizing municipal services, but as it is to take effect nine days after its approval, it does not affect the business of the department of finance for the past fiscal year.

Act No. 8 of the extraordinary session of the legislature, approved December 12, 1918, provided for the reconstruction of insular buildings and for aiding the municipalities and school boards and private persons in the reconstruction of buildings that were damaged or destroyed by the earthquakes. This law appropriated the sum of \$60,000, to be donated to those persons whose houses were either damaged or destroyed and who were not in a position to repair or reconstruct them, in amounts not exceeding \$250 per capita; and also appropriated the sum of \$200,000 to be loaned on first mortgage to those persons whose financial situation permitted them to repay the Government.

A board was created, composed of the governor of Porto Rico, the commissioner of the interior, and the treasurer, and this board decided not to give away the donations in cash, but rather to have the houses repaired or reconstructed, as required, under the supervision of the commissioner of the interior, and this work is now being done.

Many obstacles have arisen, however, for the granting of the loans. In some cases the titles to the properties affected are deficient. In other cases the property is not enough security for the government funds to be loaned, while in many others the property is already subject to a prior mortgage. Under such circumstances the loans could not be made.

Other laws of minor importance to the department of finance were also approved by the last legislature, and mention thereof will be made in the course of this report. However, a most important bill seeking to regulate the business of insurance companies established on the island was introduced, but unfortunately did not become a law. It is to be hoped that it will be approved at some subsequent session of the legislature.

PERSONNEL.

The only important change made in the personnel of this department during the last fiscal year has been the resignation of Mr. Luis Venegas Castro of his position as assistant treasurer, in which he rendered very satisfactory service, to accept a more remunerative position with a bank of this city.

A few positions of lesser importance were vacated during the period covered by this report, and following established policy, have been filled by promotion. Where promotions were not made, the civil service act and rules have been adhered to for appointments.

Before closing these general remarks I wish to state that the law imposes so many duties upon the treasurer of Porto Rico outside of the official business of the department of finance, that it is very difficult, if not impossible, to pay as much attention to the work of his office as is desired. The amount of work which is absolutely necessary for him to perform is really extraordinary. The treasurer of Porto Rico is ex-officio chairman of the board of review and equalization, a member of the executive council of Porto Rico, of the public service commission, of the board of trustees of the University of Porto Rico, of the workmen's relief commission, of the commission for the construction of rural school buildings, of the teachers' pension fund commission, the homestead commission, and of the earthquake relief board. Outside of his official duties, but in consideration of his position, he is a member and treasurer of the Victory and Liberty loan commission and the Porto Rico Chapter of the Red Cross.

Some measure should be adopted to relieve the heads of departments of additional duties of this nature for the good of the service. Human faculty is limited.

The official activities of the various bureaus of the department of finance are set forth under the appropriate headings.

BUREAU OF ACCOUNTS AND OF THE PAYMASTER.

Financial condition of the insular treasury for the fiscal year 1918-19—insular revenues.—At the close of business on June 30, 1919, there was an available cash balance of insular revenues, in the treasury of Porto Rico, of \$838,385.93, as shown in Exhibit No. 22.

Of this amount, \$45,000 is represented by unpledged bonds and the balance, \$793,385.93, is actual cash on hand.

The revenues in transit at the close of said fiscal year were as follows:

The proportional part and excess resulting from the sum of \$361,168.87 of taxes paid under protest, or approximately \$150,000 belonging to the insular government.

The sum of \$134,849.64 due by the municipalities and \$799.99 due by the school boards.

The sum of \$27,177.24 due from the lease of public lands and other sources.

The amount of \$82,744.55 from taxes collected in the United States on articles produced in Porto Rico and exported to the United States for the period from January 1 to June 30, 1919.

These different revenues in transit make a total of assets of \$395,571.43.

The total amount of available cash and revenue in transit at the close of business on June 30, 1919, is therefore \$1,188,957.36.

The available cash balance from insular revenues should have amounted to \$1,166,142.23, but during the last fiscal year we have had two extraordinary expenditures, not included in the budget, as stated below:

The legislature of Porto Rico, at a special session and by act No. 1 approved December 4, 1919, appropriated the sum of \$300,000 for the relief and aid of persons suffering from influenza, and to prevent the propagation of said disease; temporarily creating local boards of charity and determining the precedence or priority of this appropriation over any other no-fiscal-year appropriation heretofore made, and for other purposes.

Out of this sum the amount of \$272,756.30 has actually been expended, and as no additional revenues were created to meet this extraordinary disbursement, the cash balance has been necessarily decreased in an equal amount.

During the year 1915 The People of Porto Rico reduced to \$400,000 the loan of \$800,000 contracted with the Mechanics and Metals National Bank of New York, which obligation is represented by a demand note subscribed by the governor of Porto Rico. During the fiscal year covered by this report, \$100,000 was paid on account of this loan, reducing it to \$300,000.

Trust funds.—In addition to the balance of \$838,385.93 from insular revenues, already mentioned, there remained a balance in trust funds of \$4,183,930.43 for specific purposes, which makes up a total of \$5,022,316.36 in the insular treasury, distributed as follows:

Insular revenues:		
Cash.....	\$793,385.93	
Bonds unpledged.....	45,000.00	
		\$838,385.93
Trust funds:		
Cash.....	2,552,430.43	
Bonds pledged.....	1,631,500.00	
		4,183,930.43
Total.....		5,022,316.36

The sum of \$1,631,500 in bonds pledged is distributed as follows:

Deposit in American Colonial Bank of Porto Rico as collateral security for loan of \$300,000 made by the Mechanics and Metals National Bank of New York to The People of Porto Rico:		
Municipal bonds.....	\$248,500.00	
School board bonds.....	152,500.00	
		401,000.00
Held in trust and deposited in safety deposit vault of the Royal Bank of Canada as collateral security for \$1,225,000 refunding bonds:		
Municipal bonds.....	901,500.00	
School board bonds.....	329,000.00	
		1,230,500.00
Total.....		1,631,500.00

The amount of \$2,552,430.43 in cash is distributed as shown in Exhibit No. 31 under the section of "Disbursements."

Even though the loan made by The Mechanics and Metals National Bank of New York has been reduced to \$300,000, the corresponding release of collateral securities has not yet been made, but proper steps are now being taken to that end.

Estimated financial condition of the insular treasury for the fiscal year 1919-20.—The legislature of Porto Rico, at its last session, approved two laws for the purpose of providing revenues for The People of Porto Rico—the income tax and the excise tax laws. Another act, reorganizing the municipalities of the island, has been approved, and its economical effect will be to increase the revenues of the municipalities, consequently decreasing the revenues accruing to the insular treasury.

The income of the insular treasury, therefore, for the fiscal year 1919-20, on the basis of these enactments, is estimated at \$7,121,347, distributed as follows and as shown in Table No. 1 of this report:

Customs.....	\$370,000
Excise taxes.....	3,426,000
Property taxes.....	295,347
Telegraph and telephone receipts.....	100,000
Interest on loans to municipalities and school boards.....	80,000
Court fees and fines.....	30,000
Interest on bank deposits.....	70,000
Miscellaneous income.....	60,000
Income taxes.....	2,625,000
Inheritance taxes.....	45,000
Harbor and dock fees.....	20,000
Total.....	7,121,347

The total assets for the year will be as follows:

Cash on hand, internal revenue, June 30, 1919.....	\$793,385.93
Unpledged bonds.....	45,000.00
Revenues in transit.....	395,571.43
Estimated income 1919-20.....	7,121,347.00
Total.....	8,355,304.36

The liabilities for this fiscal year will be as follows:

Unexpended balances:	
Fiscal year 1917-18.....	\$196,202.61
Fiscal year 1918-19.....	341,235.99
Fiscal year 1919-20.....	7,087,412.15
No-fiscal year appropriations.....	1,379,578.13
Loan from Mechanics and Metals National Bank of New York.....	300,000.00
Loans from insular banks for earthquake relief.....	240,000.00
Total.....	9,544,428.88

which would show a deficit of approximately \$1,189,124.52, considering the total amount of available assets, assets in transit, and probable income for 1919-20.

This is the real situation of the insular treasury, but there is still on the books an appropriation of \$287,161.46 for the construction of a capitol, which has been repealed by act No. 47, which was approved on June 13, 1919, providing for the construction of a capitol building and for the covering into the treasury of Porto Rico of the sum of \$500,000 from the food commission; for the sale at public auction of the building known as the "Deputacion Provincial," and to repeal an "Act to provide funds, in the amount of \$287,161.46, for the erection of an insular building to be known as the 'Capitol Building,'" approved March 12, 1908.

There still exist no-fiscal-year appropriations, not set up, aggregating \$935,139.43. Exhibit No. 32 shows the net deficit, excluding appropriations not set up and other items.

In last year's report it was stated that, in accordance with the last paragraph of section 34 of the present organic act, the legislature shall not make any appropriations nor authorize any expenditures in excess of the total revenue provided by law, including any available surplus in the treasury, without providing at the same time for levying a special tax to meet such appropriations or expenditures. It was also stated that this provision did not exist in the former organic act, and that long before March 2, 1917, on which date the present organic act went into effect, many appropriations had been made relying upon the income and surplus of the insular treasury, so that the total amount of liabilities, including expenditures for fiscal-year and no-fiscal-year appropriations, were in excess of the insular revenues, which is embarrassing to the insular treasury.

It was suggested that a careful selection should be made of the most necessary or indispensable appropriations and that the rest should be repealed by appropriate legislation. To this end a bill was introduced at the extraordinary session of the legislature of Porto Rico repealing all those no-fiscal-year appropriations, creating a special fund to be made up of the surplus remaining in the treasury of Porto Rico at the close of every fiscal year, and determining the order and manner in which the public works mentioned in the acts to be repealed were to be taken up. This bill did not meet with the approval of the legislature.

A new bill was introduced at the last ordinary session of the legislature, in which all those no-fiscal-year appropriations were repealed and new taxes imposed to form a special fund with which to carry into effect all the public improvements authorized under the said no-fiscal-year appropriation acts. This bill was the subject of much discussion, but it did not finally become a law.

The efforts, therefore, to clear up the abnormal condition of the insular treasury have been fruitless, and the treasury continues to be in the same situation reported last year, because of the existence of the no-fiscal-year appropriations authorized before the approval of the present organic act.

VARIOUS SOURCES OF REVENUE.

Property taxes.—The total amount of taxes collected on real and personal property during the fiscal year was \$3,322,751.79, including protested taxes collected in previous years and distributed.

Of this total, one-tenth of 1 per cent goes to the insular treasury, and nine-tenths of 1 per cent to the municipalities; but according to act No. 70, approved April 13, 1916, providing for additional revenue for The People of Porto Rico, the municipalities and school boards should receive an equal amount to that received from general property taxes during the fiscal year 1916-17, and the excess revenue derived from this source shall be retained for the use of the insular treasury. The insular treasury has derived from this source the amount of \$257,327.12, and the excess of the general maximum quota assigned to the municipalities and school boards is \$571,071.32, making a total of \$828,398.44 for the use of the insular treasury.

At the close of the year all the municipalities and school boards of the island, with the exception of Guanica, had been liquidated, receiving their total proportionate amount of taxes according to said act No. 70. The municipality of Guanica has not yet been liquidated because some of the taxes in that municipality have been paid under protest, but the difference is very small.

Act No. 70, already mentioned, has been repealed by act No. 85, establishing a system of local government and reorganizing municipal services, approved July 31, 1919. According to this act, the municipalities are divided into three classes: Those belonging to the first class, which are San Juan, Ponce, Mayaguez, and Arecibo, will receive eighty-hundredths of 1 per cent of the taxes on real and personal property, and all other municipalities, included in the second and third classes, will receive ninety-hundredths of 1 per cent of these taxes.

United States Internal Revenue.—The total amount received from this source, as shown in Exhibit No. 30, reaches a total of \$929,571.03, covering collections to December 31, 1918. There is included in this total the sum of \$287,505.46 from collections made from April 1 to June 30, 1918, which were received during the present fiscal year.

There is still in the hands of the Treasurer of the United States a balance from collections made from January 1 to June 30, 1919, which amount has not yet been received by this department at this writing.

Customs.—The amount of \$355,000 has been derived from customs during the fiscal year.

Excise taxes.—The total amount derived from excise taxes was \$2,361,210.76.

Income taxes.—The income tax during the fiscal year yielded the sum of \$802,123.80.

More detailed data in connection with the excise and income taxes will be found under the headings "Bureau of income tax" and "Bureau of excise taxes," in another section of the present report.

The various sources of revenue are given, in statement form, under Exhibit No. 30, appended hereto.

INDEBTEDNESS OF THE INSULAR GOVERNMENT.

The total bonded indebtedness of the government of Porto Rico, as shown under Exhibit No. 14, amounts to \$9 516,000 at the close of the fiscal year, or \$366,000 more than in the previous year, which difference is explained as follows:

<i>Bonds issued during the fiscal year:</i>	
Public-improvement bonds, 1918.....	\$500,000
Irrigation bonds, 1918.....	117,000
Total.....	617,000
<i>Paid out during the fiscal year:</i>	
On account road loan, 1907.....	50,000
On account irrigation loan, 1909.....	180,000
On account refunding bonds, 1915.....	21,000
On account refunding bonds, 1916.....	30,000
Total.....	251,000

There must be added, however, to the total bonded indebtedness the sum of \$300,000, balance due from a short-term demand note with the Mechanics and Metals National Bank of New York and \$240,000 from six temporary loans contracted with local banks to provide funds for the purpose of reconstructing the insular buildings and aiding the municipalities and school boards and private persons in the reconstruction of buildings that have been damaged or destroyed by the earthquakes of 1918.

The total indebtedness of The People of Porto Rico is, therefore, \$10,056,000.

The amount of \$350,000 from temporary loans to provide funds for the food commission created by joint resolution No. 10, approved April 12, 1917, negotiated with local banks during the fiscal year 1917-18, has been paid during the fiscal year 1918-19, as also the sum of \$100,000 to the Mechanics and Metals National Bank of New York, already mentioned.

The new obligation of the insular government not secured by bonds and contracted during the year amounts to \$240,000, but payments having been made to the amount of \$450,000 this total indebtedness has been decreased in the amount of \$210,000, and the bonded indebtedness, as already stated, having been increased in the sum of \$366,000, we have that the total indebtedness of The People of Porto Rico has only been increased by \$156,000.

An examination of the figures giving the balance in the sinking fund to June 30, 1919, as per Exhibit No. 14, shows that there is available the necessary amount for the redemption of the first bond issue of 1907 and the issue of 1910, for roads and bridges, and that the sum of \$106,021.93 is already accumulated to the issue of 1914. In addition, the sum of \$254,000 will be carried to the sinking fund from collections for 1919-20.

With the purpose of reducing the insular bonded indebtedness, there was approved on June 23, 1919, an act authorizing the treasurer of Porto Rico to purchase for The People of Porto Rico unmatured bonds of any of the issues of the insular government, provided the balance in the respective sinking funds is sufficient to cover the balance pending redemption of the issues.

The abnormal conditions prevailing in the bond market during the war seem to have disappeared, and this circumstance has enabled us to dispose of \$500,000 public-improvement bonds dated January 1, 1918, and of \$117,000 irrigation bonds dated January 1, 1918.

Banking.—The accompanying table, No. 2, shows that the island has increased its banking activities with the opening of a new bank—El Banco Masonico de Puerto Rico—located at San Juan, with a capital stock paid in of \$20,540.

The Banco de San Juan has also been organized with an authorized capital stock of \$50,000, but at the close of the fiscal year had not yet begun business.

As stated in my previous report, the extension to Porto Rico of the "rural credits act" is an urgent necessity, as it will greatly better the financial situation of our small landholders. Efforts are being made toward accomplishing this end by the Porto Rican authorities.

An examination of the consolidated report of the banks in operation at the close of business on June 30, 1919, as compared with the report for last year, shows the following differences:

RESOURCES.

On loans, an increase of.....	\$7,503,972.29
On bonds and stock investments, an increase of.....	1,288,835.60
On reserve cash funds in banks, an increase of.....	331,068.70
On balances with other banks, bankers, and correspondents, a decrease of.....	252,394.96
On real estate, an increase of.....	24,800.02
On expenses, pending general balance, an increase of.....	42,817.65

LIABILITIES.

On capital stock paid in, an increase of.....	381,997.03
On reserve fund, an increase of.....	140,482.88
On undivided profits, a decrease of.....	83,032.39
On individual and government deposits, an increase of.....	4,940,795.83
On balances due other banks, bankers, and correspondents, an increase of.....	773,764.64
On profit accounts, pending general balance, an increase of.....	235,556.60
On mortgage bonds issued, a decrease of.....	6,720.00

Insurance.—Table No. 3 shows transactions in Porto Rico by insurance companies in the calendar year 1918. Reference to the report of this department for the year 1917-18 will show the growth of this business in 1918, as compared with transactions during the year 1917. Suffice it to state here that the year 1918 marked an increase in fire insurance written of \$65,116,566.92, and in marine insurance of \$10,457,656.62 more than the figures reported for 1917. Further detailed information regarding insurance transactions may be had from Table No. 3, above mentioned.

BUREAU OF PROPERTY TAXES.

Assessment.—The assessed valuation of all property on the island for the fiscal year 1918-19, excluding corporations, reached the sum of \$187,709,466, which yielded a tax return of \$2,370,519.34.

During said year there were 311 corporations doing business on the island, the assessment of which amounted to \$66,459,786, on which sum there has been levied a tax of \$862,384.80.

The total assessed valuation, for purposes of taxation, of all corporation and individual property revised to June 30, 1919, reached the amount of \$254,169,242.

The first general assessment of all real and personal property in Porto Rico, carried out in the fiscal year 1901-02, reached a total valuation of \$96,430,994.

The present assessment of all property on the island shows an increase in the valuation of \$157,738,248, or 163.5763 per cent over the first general assessment of 1901-02.

The result of the assessment for the last fiscal year of 1918-19, revised to June 30, 1919, is found in detail in the tables annexed to this report, which are self-explanatory, and show:

(a) Total assessed value of real and personal property, by municipalities, Table No. 4.

(b) Tabulation of assessed value of real property, by municipalities and classes, Table No. 5.

(c) Number of acres, by municipalities and classes, Table No. 6.

(d) Average value per acre, by municipalities and classes, Table No. 7.

(e) Total assessed value of personal property, by municipalities and classes, Table No. 8.

(f) Number of head of live stock, and vehicles, and average value per unit, Table No. 9.

All these tables are corrected to June 30, 1919.

The following figures furnish interesting data regarding the real and personal property of the island, grouped according to their individual valuations:

From \$100 to \$500 each.....	\$9,920,026
Over \$500 and less than \$25,000 each.....	100,086,771
Over \$25,000 and less than \$50,000 each.....	26,828,847
Over \$50,000 and less than \$100,000 each.....	23,222,515
Over \$100,000 and less than \$500,000 each.....	31,839,868
Over \$500,000 and less than \$1,000,000 each.....	19,728,111
Over \$1,000,000 and less than \$2,000,000 each.....	25,639,756
Over \$2,000,000 each.....	16,903,348

The total amount of taxes, both from individual property owners and corporations, levied on said assessed valuation of real and personal property, is \$3,232,904.14, as shown in Exhibit No. 20, distributed as follows:

Insular tax, one-tenth of 1 per cent.....	\$254,168.68
Municipal tax, nine-tenths of 1 per cent.....	2,287,517.68
School tax, at different rates, not exceeding one-tenth of 1 per cent.....	250,022.14
Insular bond-redemption tax, one-tenth of 1 per cent.....	254,168.69
Municipal bond-redemption tax, at different rates, according to municipality.....	187,025.95
Total.....	3,232,904.14

In accordance with the provisions of act No. 70 of the legislature of Porto Rico, approved April 13, 1916, the municipalities received, out of the municipal tax, the amount of \$1,651,724.51, as per distribution made during the previous fiscal year, and the remainder of \$635,793.17 goes to the insular treasury for its use and benefit. Adding to this amount the sum of \$254,168.69 of the one-tenth of 1 per cent of the insular tax, the insular treasury receives \$889,961.86 for general expenditures.

Uncollected taxes.—The total net amount of taxes assessed and levied for the fiscal year 1918-19 is \$3,232,904.14, as already stated. Of this amount, \$3,165,096.26 has been collected during the year, leaving a total amount of taxes pending collection on June 30, 1919, of \$40,105.60. The accumulation of taxes uncollected from the beginning of the present tax system shows an amount of \$27,702.28, thus making a grand total of \$67,807.88 of uncollected taxes. (See Exhibit No. 19.) This total is distributed as follows:

Pending judicial action.....	\$38,430.28
Payments extended.....	12,320.13
Probably uncollectible.....	13,552.56
In claims.....	3,504.91
Total.....	67,807.88

In the amount of the item "Pending judicial action," there are included \$21,059.80 from the American Railroad Co. of Porto Rico and \$11,489.42 from the Porto Rico Coal

Co., of San Juan, P. R., which are now in litigation against the treasurer of Porto Rico, and the remainder is pending collection by legal action of the treasurer against the taxpayer.

The amount of \$13,552.56. "Probably uncollectible," represents taxes on personal property which has disappeared and its owners have become insolvent or are absent with residence unknown. The law should provide a measure in regard to taxes on personal property so as to reduce this annual loss to the Government.

Inheritance taxes.—The total amount of inheritance taxes collected during the fiscal year just closed is less than the amount collected during the year 1917-18, notwithstanding the fact that the value of inherited property in 1918-19 is greater than for 1917-18. This means that the increase or decrease in the amount of inheritance taxes depends exclusively upon the tax rate, which differs according to circumstances. The statement of inheritance taxes collected in 1918-19, as compared with 1917-18, is as follows:

	1917-18	1918-19	Difference, plus (+) or minus (-)
Amount of tax-exempt inheritance.....	\$916,449.45	\$1,796,919.11	+ \$880,469.66
Inheritance liquidated.....	1,867,051.91	1,913,945.29	+ 46,893.38
Total.....	2,783,501.36	3,710,864.40	+ 927,363.04
Taxes collected.....	63,417.69	42,004.83	- 21,412.87
Taxes pending.....	4,642.98	643.89	- 3,999.09
Total.....	68,060.67	42,648.71	- 25,411.96

BUREAU OF INCOME TAX.

Organization of the bureau.—Up to June 30, 1919, income tax matters were handled by a branch of the bureau of property taxes, under which the administration of the Federal acts of 1913 and 1916 and the insular act of 1917 resulted in a remarkable success.

It was stated in last year's report to the governor, that due to the importance the income tax was gaining in Porto Rico, it was evident that the organization of a new bureau in lieu of the income tax subdivision which operated annexed to the bureau of property taxes, was a necessity. This necessity was readily recognized by our legislature, and in the new income tax act hereinbefore mentioned provision was made for the establishment of a bureau of income tax on and after July 1, 1919. This new bureau has already been organized and is now in operation, performing the task assigned to it by law.

The bureau is made up of a capable personnel whose efficiency and past efforts lead me to the belief that the income tax will hereafter be administered with as good or better results than heretofore.

Income tax collections since 1913 in accordance with Federal act.—The figures given in table No. 10, elsewhere in this report, show that the increase in receipts from the Federal income tax has continued uninterruptedly year after year, this increase being of 16 per cent in 1914 as compared with receipts for 1913; of 72 per cent in 1915 as compared with receipts for 1914; of 299 per cent in 1916 as compared with receipts for 1915; and of 7.70 per cent in 1917 as compared with receipts for 1916. The considerable increase in receipts for 1916, in comparison with the yield for 1915, is due, in part, to the increase in the rate of taxation from 1 per cent in 1915 to 2 per cent in 1916. The net yield up to June 30, 1919, covering taxes assessed under the Federal acts for the years 1913 to 1918 was as follows:

1913.....	\$66,823.60	1917.....	\$577,768.93
1914.....	77,833.72	1918.....	116,810.22
1915.....	134,209.26		
1916.....	536,213.96	Total.....	1,500,650.69

The figures for 1918 are incomplete, and therefore no comparison can be established between the yield for said year and that covering the year 1917.

By reason of the new income tax law repealing the Federal act of 1916 and the insular act of 1917, which was approved by our legislature on June 26, 1919, and under which the income taxes for 1918 are to be assessed, the data included herein for said year only cover taxes assessed prior to the passage of the new law upon corporations filing their returns for fiscal year ending during the calendar year 1918, and certain

amounts withheld at the source. These assessments have been made under the Federal act of 1916, and therefore will have to be readjusted for the purpose of taxing income derived for the period from January 1, 1918, to the close of the fiscal year, at the rates prescribed by the new law.

Income tax collections in accordance with insular act, 1917.—Separate statements (Tables No. 11 and No. 12) are included herein showing, by classes, taxes assessed under the insular act of 1917 for the fiscal year of 1917-18. Although the yield from this act was estimated in my previous report at \$700,000, the fact that assessments made up to June 30, 1919, amount to only \$605,559.61 does not necessarily mean that the estimate has failed. The filing of a number of claims by certain important taxpayers is responsible for the apparent shortage, and while it is true that a reasonable portion of such claims has already been liquidated, figures from those pending decision show that upon liquidation thereof more than \$100,000 will be assessable, and it is not improper to affirm that the \$700,000 estimate will be exceeded.

In assessing taxes for the years 1917 and 1917-18 the work of this branch of the department of finance has been somewhat complicated and cumbersome, and in some instances unavoidable delays have resulted as a natural consequence of the administration of two income tax laws at the same time, that is, the Federal law, requiring returns to be filed for calendar years, and the insular law, requiring the filing of returns for a fiscal year ending June 30, 1918. In a great number of cases it was necessary to await the close of the calendar year 1918 in order to determine the exact income of taxpayers closing their books on the calendar year basis. This was done with a view to obviating possible claims for readjustment of taxes assessed on calculated earnings and also for the purpose of relieving taxpayers from the work of taking inventories twice a year. Hereafter taxpayers are allowed by law to report their income according to their own accounting systems, provided such systems reflect the net income derived, and therefore no further inconveniences are expected in this direction.

Estimated income tax in accordance with new enactment.—For the application of the new income tax law a complete revision of the blank forms heretofore in use has been necessary, this accounting for the apparent delay in starting the assessment of taxes for 1918. However, the greater part of the office work is already prepared and no further difficulties will arise in the preparation and mailing of notifications to taxpayers who already have filed their returns, and in supplying new taxpayers falling within the terms of the new law with proper forms for reporting their income.

The personal exemptions, according to the former acts, were \$3,000 for single persons and \$4,000 for married persons. These exemptions have been reduced to \$1,000 and \$2,000, respectively.

Inasmuch as returns from individuals receiving income under \$3,000 have not been filed as yet, sufficient data is not available at this time on which to base any estimate of the probable yield to be expected from the new insular tax law for the year 1918. However, from calculations made prior to the passage of the law, based on yields for 1917 and 1917-18, and from figures on returns already filed by corporations and individuals whose income exceeds \$3,000, it appears that a conservative estimate of probable receipts for 1918 could be placed at \$2,625,000.

Should the present sugar and tobacco prices continue and should expectations as to coffee prices be crystallized into facts, it would not be unreasonable to anticipate that in a near future income taxes will constitute the main source of revenue of the insular treasury. For this achievement, of course, a thorough administration of the income tax law will be necessary, but this is now within our power, and the department of finance will accomplish it by devoting to the task all such attention and efforts as will be possible with the resources available.

BUREAU OF MUNICIPAL FINANCE.

Receipts.—The receipts of the municipalities of the island from all sources during the year, excluding the proceeds of loans and bond redemption taxes, amounted to \$2,189,178.73, consisting of \$2,063,195.31 in "ordinary funds," and \$125,983.43 in "road funds." Receipts from taxes increased from \$1,415,863.78 in 1917-18 to \$1,490,280.21 in 1918-19, this increase being due mainly to the amount of property taxes paid under protest in the past fiscal year which have been received by the respective municipalities in the following year of 1918-19, and also to the increase in the collection of taxes levied for the sale and slaughter of meat and on business licenses, because of the cessation of the restrictions imposed by the food commission upon food products.

Receipts from public-service enterprises, including water supply systems, electric plants, and piers, increased \$37,597.34. Of this increase \$34,957.68 pertained to

receipts from water works, partly due to the completion of water-supply systems in several municipalities.

From the use of municipal property the municipalities derived during the past year the sum of \$125,190.33, an increase of \$14,506.44 over the preceding year. This increase in receipts for the use of municipal property is equally distributed through all the items under that heading.

A comparison of the amounts received from the several sources of municipal income in 1917-18 and 1918-19 will be found in Table No. 13. A detailed statement of receipts for the year is given in Table No. 14.

Expenditures.—Expenditures chargeable against the total current receipts of the municipalities amounted to \$2,193,294.92, an increase of \$133,785.60 over the preceding year. Disbursements on account of current expenses, as distinguished from outlays and payments on indebtedness, were \$206,406.23 greater than in 1917-18, distributed among the items under that heading, viz, an increase of \$71,383.95 in salaries, \$57,-831.36 in repairs and maintenance, and \$77,190.92 in supplies, materials, and incidentals. This increase is due, doubtlessly, to the continued increase in the cost of materials and supplies in the market and to the high cost of living from the beginning of the war.

Expenditures from current receipts for constructions and improvements showed a decrease of \$57,181.79 below the previous year, much of which occurred in the items of streets and markets. This is due to the fear of the municipalities to take up with ordinary funds works of any importance at the high prices of materials and supplies which still prevail. The total expenditures on rural roads amounted to \$117,434.90, an increase of \$10,156.50 over the preceding year.

Expenditures from loans show a decrease of \$302,394.60 below the previous year, due, in the main, to the greater expenses incurred by the municipality of San Juan during 1917-18 on account of its loans.

The expenditures are listed in considerable detail in Table No. 15 and afford a comparison with similar tables published in previous reports. An examination of this table is on the whole favorable to the municipal administrations, which have had to contend with the same abnormal conditions which existed last year, and this notwithstanding the current expenses of the municipal governments have not increased in the same proportion which the generally unusual conditions of the island seemed to demand.

Available funds for general expenditures.—The cash balance in "ordinary funds," that is, funds available for general expenditures, as distinguished from "road funds," "loan funds," and others, the use of which is restricted to specific purposes, was \$154,082.64, a decrease of \$12,664.71 below the preceding year. Deducting from this balance the amount of floating and current indebtedness carried over to the next fiscal year, there remains a surplus of \$66,740.49.

Municipal indebtedness.—In addition to the funded indebtedness, amounting to \$2,066,583.11 (Table No. 16), the municipalities closed the year with reported current indebtedness to the amount of \$7,631.64, being indebtedness incurred within budgetary appropriations but not paid before the end of the fiscal year, and reported floating indebtedness in the amount of \$94,973.79, being indebtedness incurred in excess of the budgetary appropriations. This latter item appears to be too large if compared with the amount of such indebtedness incurred during the year 1917-18, which amounted to \$20,635.22. However, this condition is not necessarily a serious one, as provision is made for prompt payment of these obligations from the receipts of the new fiscal year.

It had been the policy of the insular government to encourage the use of municipal revenue for such public improvements as water supply, sewerage systems, hospitals, public markets, and school buildings. Loans for these purposes were made to the municipalities by the insular government, and in addition the engineers of the department of the interior and the officials of the department of health prepared the plans, supervised the construction, and in other ways aided the municipalities in securing these public improvements. During the past years, however, the attitude of the executive council in this matter has been of extreme conservatism. The condition of the insular treasury and the general business outlook have both been such as to advise great caution in the development of increased indebtedness of any sort, especially of the sort that extends over a long period of years. However, the department of finance, with the approval of the executive council and the governor of Porto Rico, established a system by means of which the municipalities are enabled to contract loans at any time at the reduced annual interest rate of 4 per cent. This plan is as follows:

The municipality issues bonds in the amount asked for at the rate of interest of 5 per cent. In the event that these bonds are not easily sold, the municipality borrows

from any bank the sum required and executes therefor a promissory note or notes or any other written evidence of such indebtedness. As collateral security for the payment of both principal and interest, the municipality deposits with the loaning bank the bonds which may have been issued. In order to accommodate the bank in making the loan at the reduced rate of 4 per cent, the treasurer of Porto Rico deposits with the said bank the amount of the loan from insular funds, receiving in turn from the bank, as a collateral security for the deposit, the bonds issued by the municipality, besides interest at the rate of 3 per cent, and in case the treasurer of Porto Rico shall deem it advisable to withdraw said funds from the bank, he is authorized and empowered to sell the whole issue of the bonds or such portion thereof as may be necessary to pay the bank the balance of the indebtedness and interest accrued up to the date of payment.

Following this plan, loans in an amount of \$166,000 have been authorized by the Executive Council during the past year, and it is expected that further loans will be made as the conditions of the insular treasury will permit it.

General remarks.—The municipalities of the island continue to be in excellent financial conditions. The difficulty of making advances or loans to the municipalities from insular government funds was overcome by the plan set forth in the preceding paragraph and by the resolution adopted by the Executive Council on August 6, 1918, authorizing the municipalities to enter into negotiations with banking institutions or private individuals for loans or advances, referred to in my last report to the governor. By these means the municipalities have contracted loans to the amount of \$174,000, being for the most part employed in public improvements.

BUREAU OF EXCISE TAXES.

Excise-tax receipts.—The revenue derived from excise taxes during the fiscal year 1918-19 reached the amount of \$2,391,808.23, which, compared with the amount derived from the same source last year, shows an increase of \$246,932.59. This increase was obtained mostly from the new laws passed by the legislature creating new sources of revenue and which were in full force during the fiscal year under review.

Of all the items covered by the excise-tax laws, shown in attached statement (Table No. 17), the one most worthy of consideration is that of cigarettes, receipts from which have increased steadily for the past three years, reaching the amount of \$917,553.29 during this fiscal year and showing an increase of \$192,452.91 over the previous fiscal year. In this connection it has been observed that there is a large demand for cigarettes made from other than Porto Rican tobacco, which are being introduced in the island from the United States in increasing proportions, rather than for local brands made exclusively from native tobacco.

The increased receipts from automobiles and supplies rank next to cigarettes in said statement and still greater collections from this source are expected for the next year.

The increase shown in the receipts from alcohol contained in medicines and perfumery was expected by the bureau early in the beginning of the year from observation of a marked tendency on the part of certain classes of people to consume these articles as substitutes for alcoholic beverages. Notwithstanding the efforts of the personnel of this bureau working in cooperation with the department of health and the police force to remedy this evil, favorable results were not obtained until late in the year, when new legislation was enacted regulating the manufacture and sale of these articles.

The decrease in receipts from alcohol, beer, wines, and liquor licenses is unquestionably due to the restrictions placed upon these articles by national and local prohibition laws.

Exports.—The donation of cigarettes to the soldiers at the front increased considerably the exportations of this article. On the other hand, the exportation of cigars has been less this year, due to the prolonged strike of cigar makers which lasted from January 1, 1918, to July 31, 1919.

The exportations of bay rum and medicines have increased in proportion to the growth of these industries in Porto Rico, due to an ever-increasing demand for these products in the exterior.

Leaf tobacco.—The crop and production of leaf tobacco for the fiscal year ending June 30, 1919, was less than last year on account of the low market price at which this product was disposed of in the year 1917.

The quantity of leaf tobacco imported and used in the manufacture of cigars has been greater this year on account of the larger use of mixed tobacco in the elaboration of cigars as a result of the action of the courts suspending temporarily the application

of the tobacco guaranty stamp act, which allowed the exportation of a large number of cigars made with mixed tobaccos without guaranty of the tobacco used in their elaboration.

New excise-tax law.—On June 15, 1919, a new excise-tax law was approved by our legislature, which is practically a compilation of all former laws bearing on the subject, including, in addition, some new articles of taxation, with few modifications and increasing the rate on articles already subjected to tax as well as on licenses and documents.

At the present writing it is impossible to determine the results that would ensue from the application of the new law, as some of its provisions, such as the ad valorem tax on certain articles and the tax on films, are being contested in the courts and no decisions have been rendered as yet.

The sketch and data furnished by this office to the legislature for the drafting of the new law were intended to harmonize taxation with business conditions generally in a way to make the law more effective, with the result that most of the suggestions contained therein were adopted, while other amendments were introduced.

Distilleries.—There were five distilleries in operation during the year. These distilleries only worked intermittently during short periods and produced about 1,027,950 liters of commercial alcohol, which was released for consumption as follows:

	Liters.
For medicinal and scientific purposes.....	70, 122
For industrial purposes.....	378, 969
For exportation.....	484, 859
Denatured for fuel.....	94, 000

The total production, as compared with the previous fiscal year, shows a decrease of 687,617 liters.

Prohibition.—The number of cases of violations of the excise-tax laws in connection with clandestine stills reported by the police force and the internal-revenue agents and transmitted through this office during the fiscal year amounted to 59. Forty-seven of these cases were disposed of by the courts, obtaining 34 convictions and 13 acquittals. Of these cases 1 is now under appeal and the remaining 12 are still pending trial by the courts.

In the majority of these cases the distilling apparatus used by the accused were roughly made from kerosene cans and odd pieces of common galvanized pipe, copper, and rubber tubing. The mash used for distillation consisted in most cases of fermented molasses which is produced extensively on the island and can therefore be easily obtained. The arrangement of this apparatus facilitates its disguised transportation from place to place about the country districts and makes it really very difficult for the revenue and police officers to detect these violations of the law; nevertheless, the results given are encouraging indeed, and show proof of their faithful and well-directed activities.

In regard to consumption of intoxicating liquors under medical prescription, the bureau has had knowledge of some abuse in this respect and measures are being taken to prevent the illegal use thereof.

Table references.—Detailed statistics in connection with this report are annexed and show—

1. Comparative statement showing sources of excise taxation in Porto Rico, the quantity of merchandise, in the case of the specific, and the value thereof, in the case of ad valorem tax levied, tax paid during the past four fiscal years, and the amount of such tax collected, including licenses and miscellaneous (Table No. 17).

2. Average number of licenses during the past six fiscal years, with revenue received therefrom (Table No. 18).

3. Taxable articles exported from Porto Rico during the past five fiscal years, free of tax (Table No. 19).

4. Comparative statement of excise-tax cases submitted by the internal-revenue agents during the fiscal years 1917-18 and 1918-19 (Table No. 20).

5. Comparative statement of leaf tobacco imported and grown in Porto Rico, and of exportations of leaf tobacco and elaboration of cigars for exportation and consumption in Porto Rico during the fiscal years 1917-18 and 1918-19 (Table No. 21).

6. Comparative statement of tobacco guaranty stamps used during the fiscal years 1917-18 and 1918-19 (Table No. 22).

OTHER WORK PERFORMED BY THE DEPARTMENT.

Liberty loans.—The importance of the work related to the Liberty and Victory loans in Porto Rico has been such that it has been necessary to continue the special division which was organized in the department of finance for exclusive attention to the duties arising therefrom, the most important being the handling of large sums of money until finally deposited with the San Juan branch of the National City Bank

of New York to the credit of the Treasurer of the United States and thence to the Federal Reserve Bank of New York.

The following table shows subscriptions to the five loans of this nature floated on the island and also the increase in the amounts subscribed as the new issues were made:

	Amount subscribed.	Number of subscribers.
First Liberty loan.....	\$900,000	(¹)
Second Liberty loan.....	1,985,900	4,877
Third Liberty loan.....	2,783,050	8,714
Fourth Liberty loan.....	4,723,150	15,785
Victory loan.....	2,290,050	3,812
Total.....	12,883,150	.....

¹ Not available.

A decrease is noted, however, in the amount of subscriptions to the Victory loan if compared with those to the fourth Liberty loan, but this was the natural result of the unfavorable circumstances which prevailed at the commencement of the campaign. Three reasons stand out prominently which justify the reduction. The sugar factories had not yet at that time disposed of their product of the previous grinding season and saw themselves obliged to avail of their credit to meet their business requirements. The coffee growers, even though the crops commanded relatively good prices, were not compensated as expected, because of a rather exiguous production, the high wages paid for collection and the shipping difficulties encountered. Much the same may be said of the tobacco planters, who, in addition, have had to suffer in a more or less direct way the result of the cigar makers' strikes in the Island.

Considering the unusually abnormal situation caused by the war, and, moreover, the damages wrought by the earthquakes on our western coast, it must be admitted that Porto Rico has filled a place of honor by our glorious Nation in the crusade for the freedom of humanity which has been successfully terminated.

Red Cross.—The department of finance has continued giving its earnest assistance to the Porto Rico chapter of the American Red Cross, the treasurer of Porto Rico having been reelected treasurer of the chapter.

The total Red Cross receipts during the year ended on July 31, 1919, amount to \$270,969.35, and the total expenditures to \$228,840.08, giving a cash balance of \$42,129.27. These totals are shown in the following itemized statement:

Items.	Receipts.	Expenditures.	Balance.
Rental, Red Cross home building.....	\$3,840.00	\$3,759.40	\$80.60
Hospital garments.....	6,541.85	6,035.36	506.49
Epidemic fund.....	3,173.78	1,379.10	1,794.68
Sundry relief fund.....	500.00	.....	500.00
Earthquake fund.....	18,434.72	10,532.73	7,901.99
Memberships.....	52,693.38	51,308.38	1,385.00
Arecibo fire.....	6,896.93	.....	6,896.93
Special civilian relief.....	71,250.71	50,505.77	20,744.94
General fund.....	65,053.34	62,734.70	2,318.64
Dependent families of soldiers and sailors.....	250.00	250.00	.....
Refugee garments.....	10,097.51	10,097.51	.....
Comfort kits.....	231.47	.....	231.47
Surgical dressings.....	7,547.35	7,547.35	.....
Repairs to Red Cross building.....	9,309.40	9,309.40	.....
Wool fund.....	3,665.46	3,665.46	.....
Red Cross shop.....	5,685.03	5,685.03	.....
Civilian relief.....	5,798.42	5,798.42	.....
Total.....	270,969.35	228,840.08	42,129.27

Earthquakes.—As already stated in this report, by the provisions of act No. 8 of December 12, 1918, the treasurer of Porto Rico became member of the earthquake board created thereunder, and as treasurer of this board prepared the necessary blank form for the twofold purpose of requesting donations or loans, according as the financial situation of the applicant advised it.

These blanks had necessarily to be prepared in such a way that the government's interests would be absolutely protected in the granting of loans, and so, in addition to the full description of the property affected, by boundaries, its inscription in the

registry, number of tax receipt, full details of the damages suffered, financial situation of the applicant, and in the case of loans, the term for payment thereof, they contain an oath to be taken by the petitioner before a judicial officer, a certificate to be signed by the mayor of the town whence the request is made, a certificate to be signed by the collector of internal revenue, another one by the registrar of property of the corresponding district, and still another one to be signed by a competent person estimating the damages, all which certificates serve to corroborate the truth of the statements made in the applications. In this manner the department has acquired considerable information about the property before finally deciding the board on the requests presented.

The following table shows the total amounts of loans and donations requested, by municipalities, and the number of applications for either which have been received:

Municipality.	Amount of donations.	Amount of loans.	Number of applicants.
Aguada.....	\$2,969		85
Do.....		\$5,320	6
Aguadilla.....	(1)		(1)
Do.....		10,700	8
Anasco.....	13,937		166
Do.....		9,050	5
Arceibo.....	250		1
Cajita.....	200		1
Lajas.....	150		1
Mayaguez.....	41,820		337
Do.....		118,100	64
Ponce.....	250		1
San German.....		2,500	1
San Sebastian.....	250		1
Utueo.....	1,000		4
Do.....		5,800	4

¹ Very few printed applications for donations have been received from Aguadilla, because all the houses of the poor people living by the sea were practically swept away by the waves. However, collective petitions have been received, the petitioners nearly reaching 300 in number.

It is noted from this table that Aguada, Aguadilla, Anasco, and Mayaguez are the towns which most suffered from the phenomenon, being situated as they are in the proximity of La Mona Canal, in the direction of Santo Domingo, at which canal scientists allege lies primarily the cause for these earth commotions in Porto Rico.

The table also shows that the total amount of the donations requested exceeds the sum of \$60,000, while the total of the applications for loans is under the sum of \$200,000, which were the respective amounts appropriated by legislature for these purposes. The earthquake board, therefore, has obtained authorization from the legislature for using whatever excess may result after the loans shall have been granted, when proper for donations, in an endeavor to alleviate the situation of the poorer classes that have lost their homes as a result of the earthquakes, whose petitions have been received after the sum of \$60,000 was exhausted.

The work of reconstruction is now under way, as well as the investigations which must of necessity precede the granting of the loans if the government's funds are to be duly secured.

HISTORICAL REVIEW.

Financial conditions of the government of Porto Rico in early times.—On the 1st day of May, 1509, Juan Ponce de León proposed to the governor of the West Indies, Nicholas de Ovando, a method of gathering revenue for the support of the new colony of Porto Rico, and an agreement was entered into between the governor and Juan Ponce de León whereby a number of natives were to be utilized in developing the gold mines. One-fifth of the gold obtained was to be sent to the king; two-fifths were to be reserved for the support of the colony, and the remaining two-fifths were to be given to Juan Ponce de León, who was to defray, however, out of his portion, all expenses connected with the enterprise.

The amount of gold in this way realized from August, 1509, to May, 1536, is estimated at about three and one-half million pesos.

The two-fifths devoted to the support of the government produced 466,103 pesos, or approximately 17,000 yearly.

In addition to working the gold mines, Juan Ponce established small farms, which he afterwards sold at auction. The proceeds from the sale of the farms of the king were used for meeting the general expenses of the colony.

It is seen, therefore, that the first revenues of Porto Rico were derived from the natural resources of the island and the industry of its inhabitants.

Later a tax of $7\frac{1}{2}$ per cent ad valorem was levied on all imports, and a tax of $12\frac{1}{2}$ per cent was levied on every 20 pounds of salt extracted from a salt deposit operated in the vicinity of Cabo Rojo.

The proceeds from fines were expended in public works, such as roads, highways, and bridges.

When the exploitation of the gold mines ceased, and at the beginning of the nineteenth century, the revenues of Porto Rico were not sufficient to defray the insular expenses. In order to carry out the affairs of the government an allotment was made by the Crown of Spain from the treasury of Mexico and thus an annual sum was appropriated for and was usually received in Porto Rico. The amount so sent can not be exactly ascertained, but from 1766, when the records commence, to 1808, when these gifts were discontinued, the total amount received from Mexico and Venezuela is found to have reached 13,044,077 pesos. It was upon such appropriations, called "situados," that the island of Porto Rico relied as its chief source of revenue, and the failure of a single remittance was enough to paralyze the administration of the government and to cause immeasurable suffering and poverty. The indirect effect of this charity upon the island was the standstill of her agricultural industries and the utter neglect of the inhabitants to develop its natural resources, for, depending upon this donation for nearly all their public requirements, they had no occasion to rely upon the resources of the country or on the fruits of their own industry for carrying on the government.

The first definite information as to the fiscal condition of the island is with regard to the year 1758. During said year the revenues of the island, excluding the so-called "situados," reached the sum of 6,885 pesos. This sum, increased to 10,814 pesos in 1763, and to 47,500 pesos in 1778, of which latter amount 19,500 pesos were reserved for church purposes and the balance was employed in carrying on the government.

About 1810 Mexico rose in arms against Spain and became an independent nation a few years later, thus ceasing the accustomed remittance of funds to Porto Rico.

Public revenues were so inadequate here that the government resorted to the issue of paper money, and in 1812 an issue of 500,000 pesos was ordered to be made, to alleviate for the time being the disaster and suffering resulting from the withdrawal of protection from Mexico, until a more effective measure could be adopted.

This scheme failed of its purpose from the very start. The paper money was so depreciated that 1 peso in coin would purchase 10 pesos in paper, and thus followed a period of misery and poverty.

In the year 1811 the Spanish courts adopted the measure of separating the treasury department of Porto Rico from the office of the governor (capitania general). Don Alejandro Ramirez, a financier, statesman, and writer, at that time secretary of the government of Guatemala, was appointed the first "intendente" or administrator of the treasury of Porto Rico.

The influence of this capable man was soon felt and the financial condition of the island improved rapidly. He immediately directed that all ports of the island be open, established customhouses at these ports, regulated tariff duties, directed that all agricultural implements be admitted free, instructed the peasants in the cultivation of the land, urged the Spanish authorities to lessen the tax on rum exported to Spain, and strengthened the colony by offering great inducements to white people to settle in the island. He instituted a revenue system by which the inhabitants of a town paid an annual quota or percentage on the production of each town, the valuations being fixed by men of local prominence. He authorized the circulation of Venezuelan currency, considerable sums of which were brought over by immigrants from that country. Lotteries were instituted, and a portion of the proceeds were set apart to form a sinking fund for the amortization of paper money. By 1816 all the paper money issued had been redeemed.

In 1815 there was published a royal decree to which the recovery and progress of the island are directly traceable. The origin of the decree is ascribed to Intendente Ramirez, and the wonderful advancement and rising prosperity from that time on is also credited to him.

By the provisions of this decree free trade in all Spanish ports was authorized. The most flattering offers were held out to immigrants and as an inducement to settle in the island they were given lands, the amount of which was in proportion to the number of slaves they brought. In five years foreigners could become Spanish subjects, and all colonists were exempted from the payment of taxes for 15 years, after which time they were to pay a tax of $2\frac{1}{2}$ per cent on the sale of the products of their lands.

A subsidy was established in 1816, consisting of an assessment of 5 per cent on the valuation of the land, to be collected every four months. In addition to this tax revenue was received consisting of 15 cents on each cuerda of cultivated land adjoining the towns, and 4 cents on each cuerda of mountainous land, pasture, etc.

From this time on the revenues of the island augmented, and in 1827 the treasury for the first time in history was able to liquidate all its obligations. Ten years later

Porto Rico contributed to the national Government the sum of 500,000 pesos to be used in carrying on the wars of Spain.

The exchange of the old "macaquina" coins for Spanish currency was ordered in 1857, and the exchange was effected at 12½ per cent discount, the island having to make up a deficit of 215,466.40 pesos resulting therefrom. Temporary increased duties on export of sugar, coffee, tobacco, molasses, and rum were levied to meet the expense, as well as 3 per cent on all salaries, pensions, etc., but these were abolished in 1862.

In 1860 Porto Rico contributed 354,386 pesos toward the expenses of the African war and in 1864 there was a balance on hand in the treasury of 2,059,389 pesos.

Considerable revenue was received in 1867 from the proceeds of the sale of the property of religious monastic orders, which were dissolved. In 1873 all slaves in Porto Rico were declared free, and to indemnify their owners the insular treasury paid out the sum of 11,018,020 pesos, at the rate of 700,000 per year.

In the year 1879 the Mexican silver coin was introduced in Porto Rico, and in the year 1895 it was exchanged by so-called provincial money. The exchange was made at a discount of 5 per cent in favor of the Mexican "peso." The total amount of Porto Rican money after the substitution was as follows:

	Pesos.
Provincial silver.....	6,426,393
Gold.....	69,084
Copper coin.....	70,000
Total.....	6,565,477

Comparison between the financial condition of the insular government at the time of the American occupation and at the present time.—It has been extremely difficult to find the necessary financial data for the years 1898, 1899, as the records of this nature in this office commence with the establishment of the civil government in 1900. All records prior to this date are on file in the office of the executive secretary and are not easily accessible, and the time for the preparation of this report is rather limited. However, this office has been able to gather sufficient data to give a more or less complete idea of the finances at that time, for comparison with present-day figures.

Another difficulty which this office has encountered is that during the fiscal year 1898–99 Porto Rico was under a military government, which modified local institutions and adopted new measures of a transitory nature, which can not be properly taken as a basis for establishing a comparison.

At the time the sovereignty of the island passed to the United States, the civil government in its general aspect was conducted through the following agencies: The central government, composed of the governor general, the insular secretary, the regional delegates, the council of administration, the board of authorities, the treasury department, the judiciary, and the court of claims. The provincial deputation (diputación provincial) had control or supervision over the budget, public works, means of communication, public instruction, agriculture, industries, commerce, health, charities, jails, administration of municipalities. The municipal government, however, was entrusted to the municipal council.

The estimated income and expenditures of these several executive and administrative bodies in Porto Rico for the year 1897–98 were as follows:

	Income.	Expenditures.
Insular government.....	\$3,939,500	\$3,536,342
Municipalities.....	2,814,597	2,811,978
Provincial deputation.....	1,217,700	1,217,700
Total.....	7,971,797	7,566,020

The estimated income of the government of the island for the fiscal year 1898–99 was as follows:

Customs.....	\$3,377,900
Territorial or land tax.....	410,000
Industrial and commercial tax.....	240,000
Tax on loading and discharging of vessels and on passengers.....	245,000
Stamped paper.....	312,200
Postage stamps.....	128,000
Dues on real property transfers.....	148,000
Tax on lotteries and profit therefrom.....	100,000
Income from school and asylum workshops.....	10,000
Government property.....	9,300
Beck taxes.....	50,000
Eventual income.....	76,693
Total.....	5,107,093

Of this total income \$4,782,500 corresponded to the insular government and \$324,593 to the provincial deputation.

The expenditures of the insular government were as follows:

For the support of the office of colonial ministry at Madrid, Spain.....	\$498,501.00
Army.....	1,262,377.76
Navy.....	223,668.20
Government, civil guard, police, and clergy.....	592,653.83
Justice.....	454,778.80
Finance.....	225,325.00
Schools.....	268,086.00
Interior.....	922,429.12
Estimated surplus.....	325,172.69
Total.....	4,782,500.00

The expenses of the provincial deputation for the fiscal year 1898-99 were as follows:

Personal.....	\$61,430.00
Personal and material for operating the lottery.....	16,520.00
Charities.....	62,762.00
Jails.....	25,000.00
Support of various schools of arts and trades.....	50,120.00
Public works.....	28,200.00
Vaccination.....	2,400.00
Hospitals and asylums.....	7,100.00
Outstanding obligations.....	15,178.00
Miscellaneous.....	46,885.00
Total.....	324,593.00

All the above figures represent pesos.

The income of the military government for the fiscal year 1899-1900, in United States currency, was as follows:

General taxes:	
Agricultural tax.....	\$206,185.00
Urban tax.....	78,124.00
Industrial tax.....	7,040.00
Commercial tax.....	81,355.00
Impost on mines and salt works.....	10,659.00
Fees on property transfers.....	3,493.00
Trade-marks and patents.....	150.00
Fees.....	2,000.00
Licenses to carry arms.....	4,500.00
Internal-revenue stamps.....	500.00
School tax.....	50,000.00
Insurance tax.....	2,800.00
Oleomargarine, etc.....	1,500.00
	\$448,206.00
Revenues:	
Rent of building sites.....	1,582.00
Rent of rural properties.....	232.00
Payment of mortgages.....	941.00
Payment of promissory notes.....	848.00
	3,603.00
Eventual receipts:	
Fines and forfeitures.....	8,000.00
Impounded cattle.....	200.00
Escheated estates.....	762.00
Sale of a dredge.....	4,323.00
Fees, teachers' institute.....	2,314.00
Rents, harbor works.....	3,559.00
Board of insane.....	1,000.00
Fajardo for school.....	20,000.00
Back taxes.....	200,000.00
	240,158.00
Customs: Import duties, etc.....	1,200,000.00
Posts: Sale of stamps, etc.....	122,541.00
Balance from previous year.....	474,217.00
Total.....	2,488,825.00

The expenditures of the military government for the fiscal year 1899-1900 were as follows:

General expenses.....	\$212,051.33
Department of posts (personal and material).....	122,541.57
Public health.....	78,235.45
Judiciary.....	189,887.99
Prisons and jails.....	211,363.26
Office of civil secretary.....	91,071.58
Audit.....	30,359.59
Treasury.....	7,066.00
Customs.....	85,319.52
Public instruction.....	329,565.48
Public works.....	528,962.85
Charities.....	45,028.18
Total.....	1,932,362.80

Comparative statement of the estimated income for the fiscal year 1898-99 and the fiscal year 1919-20:

	1898-99.	1919-20.
	<i>Pesos.</i>	<i>Dollars.</i>
Customs.....	3,377,900	370,000
Property tax.....	410,000	295,347
Excise tax.....	240,000	3,426,000
Tax on loading and discharging of vessels and on passengers.....	245,000	
Stamped paper.....	312,200	
Postage stamps.....	128,000	
Dues on real property transfers.....	148,000	
Tax on lotteries and profit therefrom.....	100,000	
Income tax.....		2,625,000
Inheritance tax.....		45,000
Miscellaneous.....	145,993	360,000
Total.....	5,107,093	7,121,347

It must be noted that the property tax amounts to \$3,232,904.14, really, but the greater part of this sum goes to the support of the municipal governments.

The following table shows the expenses incurred by the insular government, including the provincial deputation, during the fiscal year 1898-99; the expenses under American administration during the fiscal year 1901-2, and the expenses incurred during the fiscal year 1918-19:

Items.	1898-99	1901-2	1918-19
	<i>Pesos.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Support of the office of colonial ministry.....	498,501.60		
Army.....	1,252,377.76		
Navy.....	222,668.20		
Lottery.....	16,520.00		
Government, civil guard, police and clergy.....	654,083.83		
Office of the governor.....		12,740.00	49,370.00
Office of the secretary.....		39,620.00	33,400.00
Police force.....		204,350.00	498,790.00
Legislature.....		51,325.00	81,366.40
Justice.....	454,773.80	206,080.00	483,798.00
Finance.....	225,668.20	148,660.00	266,406.00
Office of the auditor.....		47,406.00	85,040.00
Education.....	347,218.00	503,420.00	2,467,703.00
Interior.....	1,020,629.00	378,942.00	964,860.00
Sanitation.....		16,148.00	285,870.00
Agriculture and labor.....			96,630.09
Penal institutions.....	25,000.00	111,013.21	247,856.00
Charities.....	72,262.00	104,497.00	263,402.00
Institute of tropical medicine and hygiene.....			14,800.00
Bureau of translations.....			14,500.00
Public service commission.....			16,520.00
Weights and measures.....			18,210.00
Bureau of supplies, printing, and transportation.....			32,180.00
Civil service commission.....			7,680.00
Miscellaneous.....	46,885.00		160,790.25
Total.....	4,836,387.39	1,814,195.21	6,089,171.65

In the item of \$347,218 for education in the year 1898-99, there is included the amount of \$59,120, contributed by the provincial deputation for the support of various schools of arts and trades.

In the item of \$2,467,703 for education in the year 1818-19, there is included the proportionate amount corresponding to the school boards of the different municipalities of the island.

Public works and improvements have been undertaken in late years with the proceeds of bond issues. The total amount of authorized issues for the construction of roads, irrigation system, and harbor improvements is \$12,475,000, from which there is now outstanding the sum of \$9,516,000, which will be paid from a sinking fund created for the purpose. Full details of the public works and improvements undertaken are given in the report of the commissioner of the interior to the governor of Porto Rico.

Accounting system.—The system of accounting for public funds in vogue at the time of the American occupation was such that the true state of fiscal affairs of the island was difficult to determine.

The Spanish system was briefly as follows: The central treasury was located in San Juan. It had at its head a treasurer who reported to the intendente or administrator, the latter, in turn, reporting to the secretary of finance. Reporting directly to the treasurer were the various agents in the collection districts, where at the head of each agency was an internal revenue collector. Each collector rendered a monthly statement to the treasurer, showing the total receipts and disbursements of his agency. The amounts reported as collected were taken up as cash by the treasurer before the amounts were actually received. The agencies were treated like depositaries and drafts were drawn upon them by the central treasury. Transfers were also made from one to another and each disbursed such amounts as were assigned by the annual budget or were specially assigned by proper authority. The collector after making the payments assigned to him transferred this cash balance to the central treasury, where the amount so transferred was taken up by the treasurer on his books under the heading "Transfer of funds."

All bonds, sureties, deposits and guaranties were either in negotiable paper, or cash, but in either event the face value of all was entered among the current receipts as cash income of the Island, and when any of these obligations matured or were satisfied the bonds, etc., were returned either in kind or cash, and the amount dropped as expenditures. It necessarily followed that the receipts and expenditures of the island were stated as greatly in excess of the proceeds from the taxes or other revenue actually available for current expenditures. Trust funds, bail bonds, fidelity bonds, judicial deposits, and promissory notes were available only for specific purposes, but nevertheless they were taken up and accounted as cash.

This system of accounting was changed immediately after the American occupation, trust funds being treated separately from the ordinary income of the Government. Payments to the treasurer are made in the form of deposits to his credit with any of the depository banks, for which original and duplicate receipts are issued. The original bank receipt is transmitted by the depositor to the treasurer, who issues a treasurer's receipt, in duplicate, therefor to the auditor of Porto Rico. The auditor countersigns both receipts, retains the original to be attached to the monthly account current rendered by the treasurer and forwards the duplicate receipt to the depositor for use as a voucher in settlement of his account. Disbursements are made by the treasurer in form of drafts upon a depository bank upon warrants executed by the auditor and countersigned by the governor. The treasurer renders monthly an account current for receipts and expenditures to the auditor.

Banking.—At the time of the American occupation there were established in Porto Rico the following banks: Banco Español, established in 1890, with capital stock paid in of 375,000 pesos; Banco Territorial y Agrícola, established in 1894, with capital stock paid in of 600,000 pesos; Banco Popular, established in 1894, with capital stock paid in of 1,000 pesos; Crédito y Ahorro Ponceño, established in 1895, with capital stock paid in of 200,000 pesos; and Caja de Ahorros de Mayaguez, established in 1898, with capital stock paid in of 2,000 pesos. The total assets of these banks in the year 1898 were \$13,155,853.27.

At the close of the fiscal year 1918-19 there existed in Porto Rico 15 banks, established in San Juan, with branches in different towns of the island. The total capital stock of these banks, paid in, reached the sum of \$3,103,513.63. Their reserve funds amounted to \$868,274.59 and their undivided profits, \$398,032.03. The total assets of these 15 banks on the date mentioned is \$40,611,178.92. Complete data of the operations of these institutions can be found in Table No. 2 accompanying this report.

Municipalities.—In the year 1899, immediately after the change of sovereignty in Porto Rico, the credit of the municipalities of the island was such that Brig. Gen. George W. Davis, military governor of Porto Rico, made the following statement in his report on civil affairs for the year 1899:

"Until municipal government and administration is reformed and elevated to a very much higher plane than now, I see no hope of greatly improved social, domestic, or economic conditions."

The progress made by the municipalities during the 20 years following the change of sovereignty has completely wiped out the distrust which existed. Suffice it to say that the floating municipal debt, which amounted to \$501,128.15 on June 30, 1901, became gradually reduced until it completely disappeared some years later.

In the year 1902 the treasurer of Porto Rico devised and put into operation an elaborate system of uniform accounting for all the municipalities of the island, involving complete reports to the insular government. The system has given absolute satisfaction and has made possible the study of the financial operations of the municipalities in such way as to have always available the necessary information for further improvement.

As there are no statistics showing the amount of receipts and expenditures of the different municipalities of Porto Rico at the time of the change of government, it is

impossible to make an accurate comparison of the financial activities of the municipalities with present figures, but there is no doubt that the progress attained in all phases of municipal activity has been surprising. At present all the municipalities close their annual operations with cash surpluses on hand, while at the end of the former régime only debts remained.

The files of the department of finance contain records of municipal financial transactions only from the fiscal year 1902-3. According to these records, the receipts of the municipalities of the island from all sources during the fiscal year 1902-3, excluding the proceeds of loans and bond redemption taxes, amounted to \$985,106.17, against \$2,189,178.73 in the fiscal year 1918-19, the difference being mainly due to the enormous increase in the amount of property taxes.

The expenditures on account of current expenses were \$1,094,194.61 in 1902-3, against \$2,193,294.92 in 1918-19, that is to say, a difference of \$1,099,100.31 equally distributed to all the expenditures.

As a further proof of the extraordinary progress made by the municipalities, I may point out the number of public-service enterprises which have been built in the 75 municipalities of the island during the past 20 years, as follows: Thirty-seven water-work systems, 8 sewerage systems, 21 markets, 77 slaughterhouses, 133 meat shops, 52 hospitals.

Although the data furnished in the preceding historical review is not as complete as should have been with more time and more complete sources of information at the disposal of this department, nevertheless it furnishes an idea of the wonderful progress of the island during the last 20 years in all the modern aspects of human activity, and it is to be hoped that this progress will not be interrupted.

Respectfully submitted,

JOSÉ E. BENEDICT,
Treasurer of Porto Rico.

TABLE NO. 1.—*Estimate of insular revenue cash receipts for year ending June 30, 1920.*

Customs.....	\$370,000
Property taxes, insular proportion.....	296,347
Excise taxes:	
Distilled spirits, domestic, manufacture of perfumery, medicines, and for other uses.....	\$60,000
Compound preparations of alcohol and alcohol exported to the United States.....	243,698
Distilled spirits, imported, contained in perfumery, in medicines, and for other uses.....	18,000
Near beer: domestic and imported.....	78,988
Wines, imported.....	1,000
Cigars—	
Consumed in Porto Rico.....	300,000
Exported to the United States.....	1,025,000
Cigarettes—	
Consumed in Porto Rico.....	793,000
Exported to the United States.....	16,000
Prepared and fine-cut chewing tobacco, imported.....	5,200
Perfumery, domestic and imported.....	22,000
Patent medicines, domestic and imported.....	70,000
Cosmetics, lotions, toilet water, etc., domestic and imported.....	11,600
Playing cards, imported.....	12,000
Arms and ammunition, imported.....	10,000
Matches, imported.....	65,000
Motor vehicles, tires, etc., imported.....	115,000
Phonographs, imported.....	1,500
Pianos, pianolas, etc., imported.....	2,000
Moving-picture films, imported.....	5,500
Diamonds and other precious stones, imported.....	1,000
Internal-revenue licenses.....	182,000
Miscellaneous licenses: Opium, gamekeepers', physicians'.....	7,200
Miscellaneous receipts: Insular and municipal court fees, notarial instruments, tax certificates, registrars of property, blank books, law pamphlets, and administrative fines.....	380,264
Inheritance taxes.....	3,426,000
Telegraph and telephone receipts.....	45,000
Court fines.....	100,000
Harbor and dock fees.....	30,000
Interest on loans to municipalities and school boards.....	20,000
Interest on bank deposits.....	80,000
Income tax:	
Federal Law.....	125,000
Insular Law: Probable income in accordance with act No. 80.....	2,500,000
Miscellaneous.....	2,625,000
	60,000
Total.....	7,121,347

TABLE No. 2.—Consolidated report of organized banks in operation in Porto Rico at the close of business June 30, 1919.

	American Colonial Bank of Porto Rico.	The Royal Bank of Canada.	Banco Territorial y Agrícola.	Banco Commercial de Puerto Rico.	Bank of Nova Scotia.	The National City Bank of New York, San Juan.	Crédito y Ahorro Ponceño.	Banco de Ponce.
RESOURCES.								
Bonds (pledged to secure insular and Federal deposits).....	\$1,190,382.95		\$80,000.00	\$220,000.00			\$108,919.80	\$80,000.00
Bonds (unpledged).....	224,425.00		18,100.00	87,550.00			50,897.66	36,796.60
Stock investments.....	155,300.00		274,586.02			\$1,092,539.48	50,000.00	
Immediately available assets:								
Reserve fund in bank—								
Bills, legal tender.....	784,970.00	\$1,093,196.00	520,209.00	427,553.00	\$155,473.00	72,917.00	300,800.00	136,117.00
Bills, Spanish Bank.....				90.00				
Gold coin.....	31,817.72	10,115.39	90,335.00	9,810.00	1,390.00	382.50	1,370.00	1,127.00
Silver dollars.....	339,963.00	5,629.00	17,955.25	88,516.25	412.00	15,900.00	19,080.00	5,450.00
Fractional coin.....	2,037.96	75,450.26	10,932.85	32,115.74	17,096.82	459.08	18,000.56	11,041.68
Clearing-house items.....	118,507.74	110,429.75	206,836.51	119,776.94	46,725.79	41,437.08	178,583.74	46,571.73
Other checks and cash items.....	199,147.32		98,126.11	362,109.87	62,025.59	8,264.42	107,304.72	179,472.65
Balances with banks and bankers—								
In Porto Rico.....	979,536.67		102,824.13		24,985.94	88,512.90	6,444.88	32,125.82
In the United States.....	790,738.82		831,572.92	235,198.59		104,582.26	336,442.77	85,002.30
In foreign countries.....	41,574.88	266.31	17,515.31	39,905.15		182,454.19	12,762.51	
Balances with other correspondents—								
In Porto Rico.....	22,124.30			128,217.06			24,363.88	
In the United States.....				6.50				
In foreign countries.....				16.55			14,655.65	
Loans:								
Secured by collateral.....	2,045,099.57	2,465,548.00	1,264,364.41	707,987.08	1,768,626.00	362,607.06	3,833.32	80,315.36
Secured by real estate.....	15,800.00	29,560.00	823,817.48	97,064.58			83,963.64	1,000.00
Personal securities.....	2,562,417.09	3,607,666.76	1,810,768.83	3,007,712.49	982,599.02	471,161.26	706,260.64	478,596.69
Overdrafts.....	55,563.43	622,969.26		16,896.55		1,926.27		
Real estate:								
Bank building.....	121,828.33		80,000.00	82,500.00			14,000.00	
Other real estate.....	2,557.20	16,793.06	2,401.83	87.19			624.29	
Furniture and fixtures.....	42,932.97		36,089.46	21,396.38			5,993.21	5,579.14
Current expenses.....	20,459.66	14,763.37		9,000.75			12,717.22	
Taxes paid.....	280.00						3,000.14	
Interest paid.....	11,880.99	1,363.93						
Cash short account.....	146.77							
Other assets (not included under the foregoing heads).....	118,304.59		9,889.55	39,284.46	1,071.01	1,064.94		6,449.26
Total.....	9,897,899.95	8,095,710.00	6,286,274.06	5,785,600.13	3,011,396.77	2,424,828.47	2,068,892.14	1,155,648.23

LIABILITIES.									
Liabilities to shareholders:									
Capital stock paid in.....									250,000.00
Reserve fund.....									4,000.00
Undivided profits.....									23,226.16
Dividends unpaid.....									243.50
Deposits:									
Liabilities to the public—									
Individual deposits, subject to check.....									300,000.00
Demand certificates of deposit.....									180,000.00
Time certificates of deposit.....									16,526.13
Certified checks.....									
Cashier's checks.....									
Savings deposits.....									
Government deposits—									
Insular government deposits.....									
Federal Government deposits.....									
Due to other banks and bankers:									
In Porto Rico.....									
In the United States.....									
In foreign countries.....									
Due to other correspondents:									
In Porto Rico.....									
In the United States.....									
In foreign countries.....									
Profit accounts:									
Bank rents.....									
Interest account.....									
Exchange account.....									
Commission account.....									
Premium account.....									
Others.....									
Notes issued.....									
Mortgage bonds issued.....									
Bills payable.....									
Taxes accrued.....									
Interest accrued.....									
Cash over account.....									
Other liabilities (not included under the foregoing heads).....									
Total.....									

TABLE NO. 2.—Consolidated report of organized banks in operation in Porto Rico at the close of business June 30, 1919—Continued.

	Banco Popular de San Juan.	Banco de San Germán.	Caja de Economías y Préstamos San Germán.	Caja de Economías y Préstamos Cabo Rojo.	Crédito y Ahorro Popular de Yauco.	Banco Macónico de Puerto Rico.	Banco de Puerto Rico en liquidación.	Total.
RESOURCES.								
Bonds (pledged to secure Insular and Federal deposits.)								
Bonds (unpledged)								\$1,649,302.75
Stock investments	\$30,000.00	\$40,160.00	\$30,000.00			\$3,800.00		1,614,253.74
Immediately available assets:								479,978.02
Reserve fund in bank—								
Bills, legal tender.	12,224.00	8,917.00	9,889.00	\$26,084.00	\$21,566.00	2,253.00		3,871,973.00
Bills, Spanish Bank.								90.00
Gold coin.	4,120.00	2,360.00		4,390.00		64.00	\$500.00	183,872.81
Silver dollars.	44.00	4,000.00		1,220.00	409.00	616.00		498,194.50
Fractional coin.	937.00	7,943.19	1,797.15	6,119.36	4,726.87	187.00		188,246.47
Clearing-house items.	8,641.11							880,480.37
Other checks and cash items.	3,286.01	8,880.08	3,336.93	9,324.90	6,702.07	2,065.99	2,150.00	1,047,194.16
Balances with banks and bankers—								
In Porto Rico.	161,113.70	86,328.96	27,240.67	77,785.01	28,217.77	9,522.90	14,968.00	1,639,618.35
In the United States.		613.09			3,978.52			2,368,094.27
In foreign countries.								274,608.36
Balances with other correspondents—								
In Porto Rico.								174,714.74
In the United States.								6.50
In foreign countries.								14,672.20
Loans:								
Secured by collateral.	108,537.45	7,438.09	9,754.12		28,313.52	3,745.12		8,856,049.71
Secured by real estate.	136,886.88	45,005.22	30,228.19		1,400.00	2,200.00		1,266,067.90
Personal securities.	180,481.99	192,188.68	142,731.48	74,311.96	57,267.25	42,618.20		14,320,776.34
Overdrafts.					736.75			998,027.26
Real estate:								
Bank building.			2,797.40					301,122.73
Other real estate.	23,040.88		1,750.00					47,224.53
Furniture and fixtures.	829.95	1,641.45	1,492.98	431.43	391.22	738.00	60.00	117,269.19
Current expenses.	6,590.39	5,489.04	1,960.28		1,801.08			82,801.56
Taxes paid.	686.80	1,442.80	509.28		298.04			6,238.66
Interest paid.		4,464.69	2,181.84		1,541.72			21,432.57
Cash short account.				8.77				165.64
Other assets (not included under the foregoing heads).	8,771.84	12,568.83	60,100.00	2,700.00		289.52	60,000.00	317,994.86
Total.	680,170.00	428,727.02	315,587.82	302,378.23	167,342.78	68,047.83	77,678.70	40,611,178.92

LIA BILITIES.									
Liabilities to share holders:									
Capital stock paid in.....	50,000.00	99,800.00	45,430.00	29,000.00	28,000.00	20,540.00	13,374.13	3,103,513.03	
Reserve fund.....	50,000.00	1,553.32	18,639.15	1,200.00	3,815.85		8,102.00	3,898,274.59	
Undivided profits.....		15.12	91.09		404.72			398,052.03	
Dividends unpaid.....	873.00	23.00	300.00	153.20			780.60	27,397.76	
Deposits:									
Liabilities to the public—									
Individual deposits, subject to check.....	150,029.35	130,712.02	110,423.67	78,485.02	28,374.09	40,936.95	11,307.94	16,181,046.70	
Demand certificates of deposit.....	5,214.95	13,690.00	3,500.00		8,935.29		1,616.77	477,567.63	
Time certificates of deposit.....		7,195.00			2,094.61			591,299.75	
Certified checks.....	8,392.36	5.24				231.50		83,155.47	
Cashier's checks.....						30.00		284,960.64	
Savings deposits.....	394,919.90	141,868.45	124,689.59	68,778.90	60,587.70	5,567.74		6,293,708.44	
Government deposits—									
Insular government deposits.....								2,918,240.43	
Federal Government deposits.....								1,476,431.79	
Due to other banks and bankers:									
In Porto Rico.....		3,329.98		9,736.10	23,708.88			1,002,381.00	
In the United States.....								321,964.63	
In foreign countries.....								2,174,410.31	
Due to other correspondents:									
In Porto Rico.....								195,809.43	
In the United States.....								33,543.70	
In foreign countries.....									
Profit accounts:									
Bank rents.....	16,110.61	23,332.16	11,438.87		5,596.49			1,437.01	
Interest account.....		13.68			10.00			196,462.97	
Exchange account.....	8.76	641.06						22,446.94	
Commission account.....								3,603.74	
Premium account.....			1.49						
Others.....	1,208.37			5,432.16	413.15			1.49	
Notes issued.....								169,296.37	
Mortgage bonds issued.....								1,741,697.82	
Bills payable.....								799,105.00	
Taxes payable.....								921,249.23	
Taxes accrued.....								3,105.69	
Interest accrued.....								13,257.51	
Cash over account.....	9,317.70	11,750.00	778.65	18,969.80				12,500.66	
Other liabilities (not included under the foregoing heads).....								230,323.56	
Total.....	680,170.00	423,727.02	315,587.82	202,373.23	157,342.78	68,047.33	77,678.00	40,611,178.92	

TABLE NO. 3.—*Transactions in Porto Rico by insurance companies in the calendar year 1918.*

A.—FIRE INSURANCE.

Name of company.	Insurance written.	Premiums thereon.	Losses paid in 1918.	Losses incurred in 1918.
Balot's Fire Insurance Co., Bal, Switzerland.....	\$5,814,632.63	\$13,253.96	\$11,372.02	\$11,372.02
British American Assurance Co., Toronto, Canada.....	10,214,199.04	15,794.51	23,722.22	23,722.22
Commercial Union Assurance Co. (Ltd.), London, England.....	5,682,728.01	27,450.72	23,857.91	23,857.91
Guardian Assurance Co. (Ltd.), London, England.....	3,574,686.00	14,853.94	4,000.00	4,000.00
Hartford Fire Insurance Co., Hartford, Conn.....	14,798,470.79	43,446.76	13,500.00	13,500.00
Home Insurance Co. of New York, New York.....	12,192,206.67	53,465.27	5,415.75	5,415.75
Lancashire Insurance Co. (Ltd.), Liverpool, England.....	2,847,950.00	15,701.23	4,831.20	450.00
Liverpool-London & Globe Insurance Co. (Ltd.), Liverpool, England.....	1,635,638.00	12,126.39	2,942.89	2,942.89
L'Union de Paris, Paris, France.....	2,678,204.67	13,190.85	2,250.00	3,250.00
North British & Mercantile Insurance Co., London, England.....	58,181,818.52	69,442.54	\$19,938.41	\$19,938.41
Northern Assurance Co. (Ltd.), London, England.....	33,172,052.00	64,451.83	444.48	444.48
Norwich Union Fire Insurance Society, Norwich, England.....	8,952,034.00	29,080.49	862.85	862.85
Palatine Insurance Co. (Ltd.), London, England.....	1,354,592.00	11,949.94	2,942.88	2,942.88
Phoenix Assurance Co. (Ltd.), London, England.....	3,110,304.68	12,410.51	247.50	247.50
Royal Exchange Assurance Corp., London, England.....	11,873,797.00	27,636.45	2,472.35	2,472.35
Royal Insurance Co. (Ltd.), Liverpool, England.....	11,543,277.77	37,671.68	.....	.....
Unión Hispano-Americana de Seguros, S. A., Habana, Cuba.....	54,000.00	611.09	.....	.....
Western Assurance Co., Toronto, Canada.....	7,165,365.67	30,591.57	3,689.84	3,689.84
Yorkshire Insurance Co. (Ltd.), York, England.....	2,732,045.00	21,792.70	.....	.....
Total.....	197,572,962.45	514,972.43	418,590.30	419,200.10

B.—MARINE INSURANCE.

British & Foreign Marine Insurance Co. (Ltd.), Liverpool, England.....	\$2,344,295.00	\$12,510.48	\$2,254.98	\$2,254.98
Commercial Union Assurance Co. (Ltd.), London, England.....	1,572,204.12	11,857.75	1,128.16	.....
Hartford Fire Insurance Co., Hartford, Conn.....	7,874,562.91	30,246.15	1,600.00	1,600.00
Phoenix Assurance Co. (Ltd.), New York.....	340,842.96	1,202.22	.....	.....
Royal Exchange Assurance Corp., London, Eng.....	10,832,259.00	76,061.32	4,290.42	4,290.42
Royal Insurance Co. (Ltd.), Liverpool, England.....	11,614,139.14	44,075.65	15,255.15	15,255.15
Total.....	34,578,308.13	184,963.57	24,628.71	23,690.55

C.—LIFE INSURANCE.

Name of company.	Policies in force Dec. 31, 1917.		Policies written, revived, etc., in 1918.		Discontinued by death, lapse, surrender, etc., in 1918.	
	No.	Amount.	No.	Amount.	No.	Amount.
The Imperial Life Assurance Co. of Canada.....	.....	(1)	.....	(1)	.....	(1)
Manufacturers Life Insurance Co., Toronto, Canada.....	506	\$1,030,354.00	249	\$428,000.00	108	\$176,500.00
The Mutual Life Insurance Co. of New York.....	72	88,972.00	2	2,661.00	5	6,916.09
New York Life Insurance Co., New York, N. Y.....	.....	(1)	.....	(1)	.....	(1)
Sun Life Assurance Co. of Canada, Montreal, Canada.....	1,144	3,199,507.00	185	696,568.00	112	301,013.00
Total.....	1,722	4,318,833.00	436	1,137,229.00	225	484,429.00

¹ No reports submitted as yet.

TABLE NO. 3.—*Transactions in Porto Rico by insurance companies in the calendar year 1918—Continued.*

C.—LIFE INSURANCE—Continued.

Name of company.	Policies in force Dec. 31, 1918.		Annuities in force, annual payments.		Gross premiums paid.
	No.	Amount.	No.	Amount.	
The Imperial Life Assurance Co. of Canada.		(¹)		(¹)	(¹)
Manufacturers Life Insurance Co., Toronto, Canada.	647	\$1,291,854.00			\$70,554.65
The Mutual Life Insurance Co. of New York.	69	84,717.00			4,215.28
New York Life Insurance Co., New York, N. Y.		(¹)		(¹)	(¹)
Sun Life Assurance Co. of Canada, Montreal, Canada.	1,217	3,595,062.00			197,550.12
Total.....	1,933	4,971,633.00			272,320.05

¹ No reports submitted as yet.

D.—ACCIDENT INSURANCE.

Name of company.	Insurance written.	Premiums thereon.	Losses paid in 1918.	Losses incurred in 1918.
The Employers' Liability Assurance Corp. (Ltd.), London, England.....	\$150,000.00	\$570.00	.....	.....

E.—FIDELITY INSURANCE.

American Surety Co. of New York, New York.....	\$595,233.00	\$2,194.14	\$632.97	\$632.97
Fidelity & Deposit Co. of Maryland, Baltimore, Md.	2,818,474.71	15,635.47	707.77	.....
National Surety Co. of New York, New York.....	3,318,580.00	14,812.39	1,615.35	1,615.35
Total.....	6,732,287.71	32,642.00	2,956.09	2,248.32

F.—LIABILITY INSURANCE.

Employers' Liability Assurance Corp. (Ltd.), London, England.....	\$344,441.21	\$36,476.15	\$18,701.14	\$27,276.14
---	--------------	-------------	-------------	-------------

G.—PROPERTY DAMAGE INSURANCE.

Employers' Liability Assurance Corp. (Ltd.), London, England.....	\$237,342.00	\$8,832.30	\$4,118.20	\$3,658.20
---	--------------	------------	------------	------------

H.—HURRICANE INSURANCE.

North British & Mercantile Insurance Co., London, England.....	\$3,700,695.91	\$34,216.66	.....	.....
Northern Assurance Co. (Ltd.), London, England.....	1,354,860.00	14,106.51	.....	.....
Royal Exchange Assurance Corp., London, England.	1,075,738.00	10,975.61	.....	.....
Total.....	6,131,293.91	59,298.78	.....	.....

I.—MARINE AND WAR INSURANCE.

St. Paul Fire & Marine Insurance Co., St. Paul, Minn.....	\$13,260,620.26	\$41,967.27	\$11,916.60	\$11,916.60
Unión Hispano-Americana de Seguros, S. A., Habana, Cuba.....	206,770.50	1,853.84	.....	650.00
Total.....	13,467,390.76	43,821.11	11,916.60	12,566.60

TABLE NO. 4.—Total assessed value of real and personal property, by municipality, for the fiscal year 1918-19.

[Corrected to Mar. 4, 1919.]

Municipality.	Real property.	Personal property.	Total.	Municipality.	Real property.	Personal property.	Total.
Adjuntas.....	\$2,026,030	\$146,386	\$2,172,416	Lares.....	\$2,528,267	\$167,858	\$2,696,125
Aguada.....	2,012,609	142,653	2,155,262	Las Marias.....	1,555,140	44,595	1,599,735
Aguadilla.....	2,090,144	516,472	2,606,616	Las Piedras.....	1,000,934	88,419	1,089,353
Agua Buenas.....	708,232	91,652	799,884	Loiza.....	2,284,323	222,254	2,506,577
Albionito.....	1,337,257	142,784	1,480,041	Luquillo.....	1,131,430	151,433	1,282,863
Anasco.....	2,189,496	144,284	2,333,780	Manati.....	3,002,021	636,769	3,638,790
Arecibo.....	8,686,284	2,145,162	10,831,446	Maricao.....	1,562,660	60,870	1,623,530
Arroyo.....	1,935,854	238,804	2,174,658	Maunabo.....	918,982	111,300	1,030,282
Barceloneta.....	2,519,572	373,820	2,893,392	Mayaguez.....	7,108,117	2,486,555	9,594,672
Barranquitas.....	635,329	60,906	696,234	Moca.....	973,060	53,900	1,026,960
Barros.....	1,024,310	64,960	1,089,270	Morovis.....	865,270	83,350	948,620
Bayamon.....	4,606,336	891,533	5,497,869	Naguabo.....	2,277,083	358,702	2,635,785
Cabo Rojo.....	2,620,184	299,810	2,919,994	Naranjito.....	499,997	53,310	553,307
Caguas.....	4,983,145	1,198,079	6,181,224	Patillas.....	1,664,815	239,232	1,904,047
Camuy.....	1,899,114	179,527	2,078,641	Penuelas.....	1,313,520	114,140	1,427,660
Carolina.....	3,180,593	526,938	3,707,531	Ponce.....	15,308,145	5,441,224	20,749,369
Cayey.....	2,870,438	466,412	3,336,850	Quebradillas.....	893,457	103,782	997,239
Ceiba.....	862,497	118,558	981,055	Rincon.....	1,025,187	168,305	1,193,492
Ciales.....	1,966,162	207,825	2,173,987	Rio Grande.....	2,064,002	266,237	2,330,239
Cidra.....	1,063,244	84,537	1,167,781	Rio Piedras.....	4,832,146	793,162	5,625,308
Cormo.....	1,681,554	227,406	1,908,969	Sabana Grande.....	848,238	129,650	977,888
Comerio.....	1,994,623	158,752	2,153,375	Salinas.....	4,878,641	747,646	5,626,287
Corozal.....	725,150	98,500	823,650	San German.....	2,651,724	589,507	3,241,231
Culebra.....	151,270	67,550	218,820	San Juan.....	24,966,432	18,233,013	43,199,445
Dorado.....	1,495,380	187,823	1,683,203	San Lorenzo.....	1,084,907	182,682	1,267,589
Fajardo.....	3,429,379	713,708	4,200,087	San Sebastian.....	1,924,043	186,832	2,110,875
Guanica.....	4,429,105	677,037	5,106,142	Santa Isabel.....	3,811,667	237,491	4,049,158
Guayama.....	4,956,813	779,389	5,736,202	Toa Alta.....	948,250	112,153	1,060,403
Guayanilla.....	1,625,404	259,875	2,085,279	Toa Baja.....	2,255,324	191,708	2,447,032
Guaynabo.....	1,052,829	108,469	1,161,298	Trujillo Alto.....	1,076,538	159,208	1,235,746
Gurabo.....	1,417,783	106,736	1,524,519	Utua.....	3,071,335	234,705	3,306,040
Hatillo.....	1,669,099	144,383	1,813,482	Vega Alta.....	1,369,792	1,043,455	2,413,247
Hormigueros.....	1,052,973	122,554	1,175,527	Vega Baja.....	2,393,666	269,564	2,663,230
Humacao.....	4,206,672	535,968	4,742,640	Vieques.....	3,214,218	490,402	3,704,620
Isabela.....	1,343,099	168,223	1,511,322	Villalba.....	786,431	94,653	881,084
Jayuya.....	1,329,490	136,574	1,466,064	Yabucoa.....	3,431,614	381,531	3,813,145
Juana Diaz.....	3,983,246	309,253	4,292,499	Yauco.....	2,810,884	463,024	3,273,908
Juncos.....	1,930,396	267,248	2,197,644				
Lajas.....	1,987,146	267,141	2,254,287				
				Total.....	206,226,471	48,848,911	255,075,382

TABLE No. 5.—*Tabulation of assessed value of real property, by municipalities and classes.*

[Corrected to Mar. 4, 1919.]

Municipality.	Urban.			Rural.							Timber brush.	
	Lots.	Improve-ments.	Total.	Cane.	Coffee.	Tobacco.	Pine-apples.	Oranges.	Coconuts.	Minor fruits.		Pasture.
Adjuntas.....	\$38,672	\$101,438	\$140,110	\$33,310	\$1,030,732					\$130,967	\$172,558	\$259,176
Aguada.....	62,550	62,550	125,100	746,041	87,014				\$142,076	59,554	319,757	6,460
Aguadilla.....	295,590	531,527	737,977	399,700	14,055		\$5,500		169,875	98,715	521,480	19,300
Aguas Buenas.....	4,340	73,640	77,980	8,400	190,390	\$21,970				49,765	257,459	47,246
Albionito.....	5,285	231,195	236,480	2,981	188,675	161,125		\$1,000		49,765	236,923	23,385
Anasco.....	9,108	229,123	238,230	881,677	397,717			6,825	65,770	35,790	294,923	39,873
Arrecibo.....	48,101	1,321,639	1,369,740	2,488,581	175,090	48,975	10,736	128,734	11,650	149,154	1,344,288	305,748
Arroyo.....	83,022	280,492	363,517	770,080	24,808				29,000	4,180	311,438	11,237
Barranquitas.....	36,968	114,894	151,870	711,107	97,345	6,980	21,040	91,040	7,140	69,723	237,502	120,378
Barraqueta.....	2,468	71,590	73,990	565	249,625	38,210				49,723	364,788	143,085
Barros.....	713,435	1,061,949	1,774,864	390,065	101,308	11,196	21,230	138,500	6,550	86,228	70,014	70,014
Bayamon.....	690	280,260	280,940	1,023,444	12,064	2,625	21,230	400	152,775	109,265	706,757	95,286
Cabo Rojo.....	87,668	1,468,716	1,556,414	1,798,659	43,945	272,560	7,030		8,840	96,990	809,154	91,953
Caguas.....	1,506	103,685	105,090	483,602	66,930	3,730			8,840	76,330	620,539	49,060
Camuy.....	1,815	217,745	219,560	605,565	9,470				85,945	39,609	68,372	68,372
Carolina.....	151,973	491,141	643,064	242,445	261,010	361,765	12,675			92,050	1,440,527	56,350
Cayey.....	6,170	29,870	35,740	428,360	100				2,600	2,000	238,980	12,000
Cidra.....	24,490	215,940	240,430	7,450	1,023,135	16,265				108,065	219,040	169,271
Ciales.....	1,450	51,670	53,020	49,953	58,265	323,446				62,300	386,761	26,755
Coamo.....	95	325,125	325,220	50	242,970	60				50,660	839,615	142,335
Comerio.....	7,411	153,210	160,621	560	82,200	222,691				42,210	267,471	26,359
Coroico.....	996	71,654	72,650	7,865	112,405	11,705				62,405	334,471	81,945
Culebra.....	670	9,160	9,830				2,250				134,035	81,400
Dorado.....	510	51,360	51,900	568,759	890			107,060	14,210	5,105	432,100	67,565
Fajardo.....	52,320	592,160	644,480	648,382		300		7,800	11,320	5,490	564,644	23,520
Guacima.....	31,447	1,030,253	1,061,780	12,040,070	100,810					27,965	232,775	30,210
Guayanilla.....	17,979	91,211	109,190	515,280	233,080	1,265			24,900	19,226	909,962	102,847
Guaynabo.....	18,970	43,960	62,920	297,957	32,832	21,875	10,150	57,980	15,400	86,190	132,266	24,524
Guatabo.....	136	126,500	127,000	371,960	18,315	125,030			2,000	24,030	399,571	28,068
Hatillo.....	58,454	795,090	853,544	310,360	24,940	64,870	3,400		4,590	81,783	766,535	33,120
Hormigueros.....	82,571	27,470	27,470	575,164	22,690					20,090	83,007	17,965
Humacao.....	18,668	707,810	726,478	126,473	47,445	150		1,000	113,330	9,890	699,590	106,430
Isabela.....	45,390	171,060	216,450	128,473	691,415	2,960		200	72,915	181,857	561,780	151,935
Jayuya.....	9,700	275,640	285,340	31,490	179,625	100,623				55,380	629,773	87,531
Juana Diaz.....	17,570	330,060	347,630	2,267,202	5,840					27,635	629,773	66,032
Juncos.....	6,220	330,060	336,280	2,264,099	6,840					36,156	866,777	30,010
Lajas.....	1,000	47,120	48,120	777,025	13,165	1,200	35,000	600	980	120,500	341,005	30,010

TABLE No. 5.—*Tabulation of assessed value of real property, by municipalities and classes—Continued.*

Municipality	Urban.			Rural.								
	Lots.	Improve- ments.	Total.	Cane.	Coffee.	Tobacco.	Pine- apples.	Oranges.	Coconuts.	Minor fruits.	Pasture.	Timber brush.
Lares.....	\$12,750	\$235,770	\$248,520	\$7,590	\$1,497,207	\$200				\$35,854	\$406,192	\$45,238
Las Marias.....	1,380	19,300	20,680	11,700	893,910	900				24,315	290,017	145,671
Las Piedras.....	734	22,976	23,710	187,450	2,940	1,000		\$2,340		301,985	330,214	12,965
Lords.....	1,070	91,280	92,350	575,430	100,285				422,575	19,585	1,045,771	25,154
Luzardo.....	2,040	47,550	47,790	616,812	5,815				76,570	5,986	286,552	43,015
Manati.....	25,644	703,411	729,055	815,112	19,070	16,485		136,505	23,825	41,968	570,369	113,551
Maricao.....	4,430	67,860	68,290		983,885			2,650	3,000	13,880	161,760	119,750
Maunabo.....	1,920	69,280	71,210	313,870	6,211	1,135				1,670	102,586	68,721
Mayaguez.....	896,430	2,852,984	3,699,414	692,630	802,935			420	142,906	112,055	450,054	115,253
Moca.....	2,640	30,510	33,150	187,847	225,380	50				58,255	332,628	13,695
Morovis.....	1,375	57,765	59,140	83,950	193,905	16,395			60	33,555	338,166	95,483
Maguabo.....	525	206,805	207,330	857,624	1,780	1,000		11,800	5,700	27,780	166,970	26,170
Naranjito.....	3,131	27,990	28,550	1,040	79,425	59,585			4,000	42,639	411,663	88,124
Patillas.....	550	122,970	123,520	498,250	88,287	25		5,400	10,225	72,820	307,609	151,620
Penuelas.....	12,227	62,453	74,680	453,580	200,855	300			1,080	109,215	1,206,898	26,965
Ponce.....	2,865,960	4,585,774	7,451,734	2,606,700	776,510	340			6,480	17,660	1,086,277	85,815
Quebradillas.....	100,150	101,010	201,160	217,857	55,575	1,075			2,100	115,680	477,100	37,712
Rio Grande.....	1,200	44,290	45,490	300,910	7,295			450		20,100	114,565	95,483
Rio Piedras.....	13,095	123,395	136,490	642,525	39,286				178,310	14,860	723,113	64,546
Rio Piedras.....	478,520	941,291	1,419,811	641,974	25,962	2,200		126,379	1,045	33,585	1,208,883	95,955
Salinas.....	95	165,120	165,215	188,033	73,137	22,660			1,900	73,511	208,985	45,472
San German.....	44,827	124,783	169,610	1,751,890	13,360	1,000			6,600	3,920	1,086,277	85,815
San Juan.....	40,874	530,348	581,022	1,634,575	279,060	13,785		300		115,680	477,100	37,712
San Lorenzo.....	10,249,379	11,894,800	22,114,179					9,000	20,100	25,660	114,565	
San Sebastian.....	1,605	154,680	156,285	108,040	69,535	95,406				70,368	354,674	95,483
Santa Isabel.....	8,544	145,086	153,630	98,085	639,846					80,220	577,969	69,835
Tos Alta.....	27,595	76,635	104,230	2,408,700	10,528				9,250	29,780	359,513	11,740
Trujillo Alto.....	10,325	108,520	118,845	628,790	10,528	7,600		51,120		29,960	412,689	24,698
Utuado.....	7,942	107,568	115,510	857,439	200	100		214,175	6,470	7,890	411,178	71,198
Vega Alta.....	24,614	25,200	174,547	4,805				44,680		19,010	412,689	5,010
Vega Baja.....	52,911	385,794	438,705	53,990	1,160,105	26,545				55,601	361,665	185,955
Vieques.....	82,740	85,190	298,481	16,080	9,802	100		34,250	1,060	15,765	280,692	86,939
Villalba.....	21,045	214,278	224,323	706,855	9,802	6,600		104,700	32,190	26,144	424,575	119,454
Yabucoa.....	710	215,580	216,590	983,415	237,300				36,760	14,075	862,940	115,125
Yauco.....	5,400	13,710	14,430	56,710	7,440	715			14,825	27,408	301,785	64,810
Total.....	23,648	790,042	813,690	4,440,320	613,570	53,235			13,750	164,640	267,785	178,120
Total.....	16,972,308	36,817,316	53,789,619	41,513,322	14,968,151	2,149,305	381,496	1,284,768	2,026,407	4,098,016	37,312,133	5,625,182

Rural.

Municipality.	Marsh lands.	Other lands.	Total lands.	Rural houses.	Buildings and machinery.			Telephone.	Track and railroad structures.	Other improvements.	Total improvements.	Total real property.
					Sugar.	Other.	Electric plants.					
Adjuntas.....	81,933		\$1,698,806	\$207,074	321,000	\$29,150		\$7,774			\$27,224	\$2,026,080
Aguada.....	1,705		1,370,047	47,468	499,860	1,600		32,376	\$23,120	\$200	680,012	2,012,009
Aguadilla.....	2,560		1,226,678	77,480	2,000				14,162	478	124,322	2,080,144
Aguas Buenas.....	100		888,860	44,392							46,392	708,252
Albionito.....	300		847,266	260,311	1,600	1,700			88,820		283,517	1,337,257
Anasco.....	4,215		1,698,699	131,551	60,000	3,100		9,196			262,007	2,189,496
Arrecibo.....	39,807		4,713,113	296,276	1,211,976	176,700		48,594	483,360	490	2,166,431	8,686,184
Arroyo.....	4,870		1,056,063	26,392	457,650			10,412	17,000	2,480	516,204	1,836,854
Barceloneta.....	20,205		1,338,694	126,178	560,867	10,165		4,421	308,577		1,009,208	2,519,572
Barranquitas.....	400		518,490	38,749							38,749	636,329
Barros.....	13,490		915,035	57,915					166,190		57,915	1,024,310
Bayamon.....	30,809		1,828,064	134,282	407,307	130,496	\$141,138	24,275			1,003,288	4,006,336
Cabo Rojo.....	22,710		2,147,651	110,110	82,933	3,000		9,000	1,500	5,060	211,593	2,620,184
Caguas.....	20,318		2,133,489	200,676	637,200	96,654	53,046	1,069	275,597		1,263,242	4,983,145
Camuy.....	16,040		1,826,881	58,335	312,960	2,440		5,108	89,160	150	468,143	1,969,114
Carolina.....	23,724		2,205,889	87,447	409,500		20,548	10,354	137,265		666,144	3,180,583
Cayey.....	2,605		1,644,440	305,152	204,230	5,915	17,607		50,000		582,934	2,870,438
Cebalva.....	53,771		737,761	17,379			4,387	3,846	63,384		88,996	782,497
Cidra.....	1,880		1,585,326	154,639		2,130		3,637			160,406	1,946,162
Comerio.....	1,660		1,377,592	122,632		4,000		7,234			122,632	1,083,244
Comerio.....	10,837		651,517	92,879		29,919	1,069,138				79,044	1,691,654
Coral.....	6,045		615,972	36,528							1,182,485	1,904,673
Culebra.....	134,435		7,005								36,528	725,150
Culebra.....	7,005		134,435								36,528	151,270
Dorado.....	125		1,203,261	71,870		1,500	7,264	4,600	154,975		240,189	1,493,890
El Rastro.....	4,820		1,298,041	147,104	1,149,310		23,586	17,118	218,840		1,456,888	2,498,379
Guacima.....	4,000		2,318,710	221,760	2,018,775			10,335	94,005		2,044,875	4,423,106
Guayama.....	20,945		2,318,710	131,438	482,732	13,440		31,238			676,223	4,826,813
Guayama.....	8,100		1,149,811	57,714	463,145			7,244		17,085	566,403	1,826,404
Guaynabo.....	3,104		1,838,888	71,595	1,700	70			30,000		131,041	1,952,529
Gurabo.....	2,453		1,086,996	113,513			28,258	380		1,050	213,787	1,417,783
Hatillo.....	430		1,807,813	63,860	161,000		12,322	432	72,800		242,691	1,969,099
Hormigueros.....	2,625		707,861	63,074	259,000			2,461	15,250		318,142	1,062,973
Humacao.....	29,886		2,067,574	62,551	842,515		38,136	27,412	383,525		1,343,128	4,206,572
Isabela.....	2,905		1,104,170	86,078		2,800		8,008	15,961		112,844	1,343,099
Jajuya.....			1,104,580	116,410	29,000	4,870					190,280	1,329,460
Juana Diaz.....	1,120		3,244,640	114,061	282,140	4,310				29,975	496,286	3,983,246
Juncos.....	2,852		8,871,717	108,490	543,686		16,706	12,066	52,725		728,399	1,080,386

TABLE No. 6.—Number of acres, by municipalities and classes, for the fiscal year 1918-19.
[Corrected to Mar. 4, 1919.]

Municipality.	Cane.	Coffee.	Tobacco.	Pineapples.	Oranges.	Coconuts.	Minor fruits.	Pasture.	Timber and brush.	Marsh-lands.	Other lands.	Total.
Adjuntas.....	426	11,437				515	3,315	6,483	21,450		348	43,459
Aguada.....	4,220	1,998				723	1,324	9,879	132	34	84	17,247
Aguadilla.....	3,609	196		55			1,673	14,351	1,669	45	17	22,338
Agua Buenas.....	71	2,108	229				1,660	10,997	3,665		54	18,774
Albion.....	37	2,539	1,511		18		1,490	12,570	2,946		55	20,186
Anasco.....	4,890	4,838			43	248	1,151	10,762	1,971		156	24,639
Arcebo.....	13,811	2,469	820	102	718	55	3,058	24,695	28,337	265	2,340	76,660
Arroyo.....	2,708	1,275				110	1,083	4,839	1,043	25	280	9,444
Barceloneta.....	4,608	1,017	70	161	396	187	2,099	4,725	6,078	8	712	21,806
Barros.....		3,429	531				2,099	12,090	9,720		51	21,064
Barranquitas.....		698	531				4,476	18,558	10,870	4	1,896	39,425
Bayamon.....	2,899	783	30	170	726	2	1,257	19,959	4,349		1,052	31,227
Cabo Rojo.....	7,626	119				556	2,476	20,761	7,900	596	1,970	41,928
Caguas.....	5,424	514	2,203			4	2,075	18,115	9,001	23	1,241	37,533
Camuy.....	3,956	845	29			45	1,910	15,598	4,707		1,241	28,354
Carolina.....	3,716	107		73		611	843	21,192	1,229	1,312	112	29,195
Cayey.....	1,757	3,389	2,989				2,690	15,922	6,207		17	31,961
Cebal.....	3,428	1				12	59	6,736	1,085	1,698		13,020
Ciales.....	81	8,828	175				3,320	9,402	14,738	332	4,885	41,761
Cidra.....	540	686	3,860				1,870	13,922	1,705			22,583
Comerio.....	1	3,016					1,334	32,707	10,873		190	48,122
Comerio.....	9		3,035				1,370	30,194	2,485		227	18,279
Coroico.....	114	983	1,125				1,509	15,442	6,314		736	25,213
Culebra.....							4,819		20			4,839
Dorado.....	2,950	9		15	455	137	134	5,423	4,475	37	289	13,924
El Riego.....	4,516				56	49	398	11,842	2,609	493	481	20,424
Guánica.....	4,317		6				737	8,359	2,671	400	5,190	21,570
Guayama.....	7,237	1,141				94	594	20,834	8,149		1,252	39,291
Guayanilla.....	1,904	1,981	14			52	2,137	5,841	10,861		1,146	22,536
Guaynabo.....	2,600	694	182			10	183	10,900	1,133	123	162	16,099
Guayubon.....	2,899	329	826	72	320		610	11,137	1,918		5	17,689
Hatillo.....	3,610	538					1,580	16,636	2,448	16	1,496	26,871
Hormigueros.....	2,863	281	720	34		28	507	1,510	398	8		6,575
Humacao.....	3,586						291	16,925	764	1,020	795	27,641
Humacao.....	1,527	638	2			533	3,725	10,953	14,628		67	31,933
Isla de Puer.....					1	372	1,535	6,965	12,353			28,769
Jayuya.....	7,425	7,495	36				7,733	17,642	7,276	114	2,020	38,044
Juana Diaz.....	8,195	2,062					1,274	8,484	3,554		5	16,813
Juncos.....	2,374		845				2,825	22,402	1,899	2,284	218	26,800
Lajas.....	6,359	114	9	208	3	4	1,315	20,492	3,986			38,915
Lares.....	127	13,043					1,694	11,563	8,188			31,308
Las Marias.....	137	10,667	11		28							
Las Piedras.....	1,773	56	10			1	3,136	12,708	8,701		2	18,387

TABLE NO. 6.—Number of acres, by municipalities and classes, for the fiscal year 1918-19—Continued.

Municipality.	Cane.	Coffee.	Tobacco.	Pineapples.	Oranges.	Coconuts.	Minor fruits.	Pasture.	Timber and brush.	Marsh-lands.	Other lands.	Total.
Lajas.....	3,355	1,044	.....	.....	.....	1,503	553	18,332	2,091	3,164	1,284	31,327
Laguaira.....	3,200	715	.....	.....	.....	338	173	7,882	3,171	1,630	.....	15,030
Manati.....	3,719	215	210	409	567	228	942	10,787	9,117	152	1,408	27,754
Maricao.....	.....	9,063	17	.....	37	.....	350	9,485	6,407	.....	40	22,982
Manabo.....	2,122	108	.....	.....	.....	.....	150	8,267	6,800	106	.....	11,554
Mayaguez.....	4,284	8,966	.....	.....	9	646	2,448	10,475	6,334	.....	87	33,244
Moca.....	1,919	2,780	.....	.....	.....	.....	2,063	16,507	2,892	.....	385	26,047
Morovis.....	1,796	1,747	198	.....	.....	.....	1,061	13,515	7,932	.....	81	23,201
Naguabo.....	6,149	80	10	.....	83	1	148	17,267	2,498	595	.....	23,754
Naranjito.....	13	717	578	.....	.....	34	718	8,439	6,635	91	1	16,730
Patillas.....	3,088	987	1	.....	.....	31	1,538	14,508	7,380	67	2,009	29,609
Penuelas.....	1,991	1,991	4	.....	18	3	1,807	9,604	11,640	.....	1,388	26,346
Ponce.....	9,540	7,589	8	.....	.....	7	1,643	28,104	22,000	1,028	1,259	71,128
Quebradillas.....	1,970	647	11	.....	.....	43	1,761	6,041	2,213	67	547	13,265
Rincon.....	1,952	58	.....	.....	3	253	542	5,107	146	.....	11	8,104
Rio Grande.....	3,895	574	.....	.....	.....	897	503	17,387	6,587	1,199	637	31,579
Rio Piedras.....	4,584	245	24	505	653	5	738	16,478	1,094	15	167	24,509
Sabana Grande.....	2,054	803	226	.....	.....	3	1,813	10,905	6,270	.....	47	20,831
Salinas.....	6,263	172	10	.....	141	26	99	27,441	6,480	1,865	399	42,760
San German.....	6,631	2,994	116	1	.....	7	3,029	14,385	3,752	.....	785	32,231
San Juan.....	.....	.....	.....	.....	17	70	74	14,649	.....	151	164	1,125
San Lorenzo.....	1,220	926	1,913	.....	.....	.....	2,778	14,825	11,205	.....	386	35,262
San Sebastian.....	1,313	7,118	.....	.....	.....	.....	2,966	26,900	4,555	.....	386	42,855
Santa Isabel.....	8,231	.....	.....	.....	.....	28	14	10,645	4,868	17	1,873	21,667
Santa Rosa.....	1,355	108	74	96	203	.....	741	11,733	1,410	.....	1,340	16,060
Toa Baja.....	4,023	2	1	182	530	28	163	5,492	2,552	332	1,145	12,549
Trullio Alto.....	1,532	47	313	187	228	.....	1,960	41,417	18,212	.....	134	74,874
Utuado.....	2	12,180	.....	.....	.....	.....	632	6,987	5,502	.....	216	16,857
Vega Alta.....	2,194	205	1	3	147	11	632	10,472	10,785	522	700	16,857
Vega Baja.....	2,987	102	59	563	466	272	932	14,854	6,138	380	247	27,925
Vieques.....	9,829	.....	.....	.....	.....	845	777	13,080	3,156	330	30	31,503
Villalba.....	1,184	2,184	.....	.....	.....	.....	423	20,280	3,159	.....	688	22,737
Yabucoa.....	7,205	146	.....	.....	.....	12	423	20,280	3,159	70	1	31,298
Yauco.....	1,622	5,631	642	.....	.....	67	4,431	10,042	14,443	.....	4,412	41,521
Total.....	288,901	185,913	22,912	2,879	6,122	9,152	102,485	1,014,741	445,932	18,933	51,129	2,072,038

REPORT OF THE GOVERNOR OF PORTO RICO.

Municipality.	Cane.	Coffee.	Tobacco.	Pineapples.	Oranges.	Coconuts.	Minor fruits.	Pasture.	Timber and brush.	Marsh-lands.	Other lands.	Total.
Luquillo.....	\$122.76	\$77.53	\$78.50	\$107.62	\$240.75	\$238.45	\$34.60	\$36.36	\$13.57	\$15.08	\$10.34	\$58.76
Manati.....	219.18	88.70	78.50	107.62	240.75	104.50	44.23	52.88	12.28	5.75	12.28	64.81
Maricao.....	146.53	101.81	66.76	71.62	71.62	300.00	39.66	24.94	18.00	.....	10.00	55.79
Moravia.....	161.68	89.56	.....	.....	46.67	261.73	11.13	31.40	18.22	.....	105.67	43.03
Moravia.....	97.86	81.07	50.00	.....	.....	50.60	28.74	21.97	5.72	39.97	.....	70.08
Moravia.....	105.46	110.99	82.80	.....	.....	167.45	32.02	26.92	12.08	.....	5.74	32.64
Naguabo.....	139.47	59.33	100.00	.....	142.17	100.00	39.16	36.83	11.73	10.56	6.17	30.13
Naguabo.....	80.60	110.77	103.26	.....	.....	328.84	27.72	19.79	14.78	19.67	13.88	60.07
Patillas.....	161.35	89.43	26.00	.....	300.00	200.00	40.30	26.84	11.97	10.00	7.53	38.02
Patillas.....	227.82	100.88	73.80	.....	.....	130.00	35.23	43.67	13.63	.....	6.36	40.57
Ponce.....	273.28	108.00	42.80	.....	.....	130.00	32.58	23.09	12.81	10.00	44.81	72.52
Quebradillas.....	110.99	85.90	97.73	.....	150.60	135.00	32.58	23.09	9.63	14.03	200.00	64.53
Rincon.....	134.15	86.32	.....	.....	.....	265.28	26.54	41.59	22.98	.....	7.24	33.51
Rio Piedras.....	164.96	68.44	91.67	155.33	186.54	198.78	29.54	19.70	9.80	23.34	350.09	33.78
Sabana Grande.....	140.05	106.97	91.82	.....	.....	209.00	49.44	78.68	8.62	.....	10.21	29.43
Salinas.....	91.54	91.08	99.82	.....	.....	300.00	40.35	39.69	13.24	13.72	70.69	70.92
Salinas.....	234.28	77.67	100.00	100.00	.....	253.85	39.60	39.69	9.97	.....	2.60	57.77
San German.....	140.94	98.20	118.84	.....	526.41	300.00	38.17	32.05	.....	11.99	189.95	180.24
San Juan.....	.....	.....	.....	.....	.....	287.14	349.32	178.97	8.52	.....	12.87	24.02
San Lorenzo.....	87.93	75.42	49.87	.....	.....	25.33	25.33	23.92	13.14	18.24	62.50	33.98
San Sebastian.....	74.70	86.89	.....	.....	.....	27.05	27.05	21.49	13.68	.....	14.43	140.99
Santa Isabel.....	292.39	.....	.....	.....	.....	55.71	55.71	56.37	17.51	21.48	29.02	45.87
Toa Alta.....	168.83	97.48	102.70	154.01	251.82	40.28	40.28	30.64	17.51	.....	33.10	110.19
Toa Baja.....	283.64	100.00	100.00	130.55	230.30	231.07	48.04	74.87	27.79	.....	159.65	66.01
Trujillo Alto.....	114.01	102.23	.....	110.91	155.75	.....	43.11	42.58	17.40	.....	3.89	31.17
Utua.....	63.89	95.18	80.33	88.33	232.99	96.45	28.37	20.55	10.21	.....	7.28	39.83
Vega Alta.....	135.92	78.49	100.00	177.02	224.68	24.91	24.91	30.08	15.80	8.85	13.55	53.56
Vega Baja.....	178.63	96.10	111.86	127.02	224.68	118.81	40.10	40.64	11.08	5.00	100.00	63.98
Vieques.....	103.20	.....	.....	.....	.....	103.62	49.91	59.09	14.16	.....	5.28	30.38
Villalba.....	95.72	106.65	178.75	106.65	.....	345.83	35.27	21.66	12.06	32.86	50.00	66.32
Yabucoa.....	179.56	50.96	82.92	179.56	.....	205.22	22.82	35.02	12.16	.....	4.42	42.17
Yauco.....	271.30	108.39	.....	.....	.....	205.22	37.16	26.67	.....	.....	.....	.....
General average.....	173.77	94.32	93.81	132.51	209.86	221.42	40.01	36.77	12.61	17.04	16.67	53.35

TABLE No. 8.—Total assessed value of personal property, by municipalities and classes, for the fiscal year 1918-19.

[Corrected to Mar. 4, 1919.]

Municipality.	Money.	Merchandise, raw material, and fixtures in establishments.	Work cattle.	Other cattle.	Horses, mules, and donkeys.	Other animals.	Carts drawn by animals.	Automobiles.	Coaches.	Portable track.	Machinery.	Hives.	Rolling stock.	Vessels.	Other property.	Total personal property.
Aduntes.	85,309	878,265	98,025	814,211	\$27,009		\$2,198	\$7,900	8890		\$1,775	\$1,810	\$240		\$1,267	\$146,386
Aguadilla.	6,084	28,610	30,530	13,145	6,705	\$225	2,545	3,960	240	\$2,000	14,800		24,819		3,000	142,653
Aguadilla.	16,340	32,175	44,730	27,385	14,235	18	5,070	22,180	460	200	9,373	900	30,885	\$8,210	3,404	\$16,472
Albion.	16,022	35,457	14,880	25,755	17,385	416	3,075	1,100	280	2,000	2,539	1,660			2,103	91,652
Anasco.	3,030	55,109	16,940	21,797	21,574	60	3,075	2,350	115		2,539	1,660	19,148		10,660	144,284
Arrecibo.	120,462	66,541	10,855	14,078	7,132		22,810	1,560	560	2,500	2,539	1,660	184,079	4,100	20,008	2,145,182
Arroyo.	28,117	113,191	101,220	95,600	40,646		5,815	79,280	3,225	49,100	39,133	250	17,900	13,710	3,088	238,804
Barceloneta.	57,798	97,224	42,210	6,505	10,520		7,040	12,800	1,750	3,300	12,730	250	121,554	6,679	5,984	373,520
Barranquitas.		27,984	38,365	19,990	12,765		1,160	14,010	50	8,300	12,730					60,905
Barros.	450	27,520	3,405	15,245	6,010			8,235			60	580				64,900
Bayamon.	48,172	22,670	1,650	23,862	15,068			1,090		5,200	20,640		76,225	30,220	87,087	891,583
Cabo Rojo.	17,828	308,184	46,186	87,451	16,294	5,328	7,576	82,530	1,460	5,200	7,208	280	32,075	2,240	770	399,310
Caguas.	57,657	77,238	64,425	60,865	14,690	50	10,990	10,481	310	330	17,263	750	118,268		84,017	1,198,079
Camuy.	3,628	562,056	125,896	62,040	46,438	964	8,620	76,060	2,959		5,483		25,925		7,500	179,527
Carolina.	5,755	35,921	40,640	26,815	19,760		3,468	3,350	1,475	400	6,483		25,925		108,419	528,938
Cavey.	13,535	64,159	51,830	131,888	18,834		3,468	14,580	505	9,600	53,618	400	21,125	150	4,981	466,412
Celba.	13,240	223,656	13,350	26,832	36,558	627	4,180	57,080	540	10,400	53,618		31,738		500	207,825
Ciales.		8,900	42,510	14,555	6,620		1,130	6,510		5,550	1,520	4,655			50	118,558
Cidra.	965	134,525	7,500	21,900	20,305		1,750	5,085	80		72		100			64,537
Comerio.	3,940	23,065	23,065	21,040	8,035		2,580	15,265	1,400		1,930	1,150				297,405
Corrao.	4,599	32,470	32,470	71,570	45,295	85	6,660	18,263	100		933	1,750			12,326	158,752
Corral.		10,650	34,470	10,120	17,668	258	520	10,000			3,680	1,700				98,500
Culebra.		1,500	58,165	4,535	150										700	87,500
Dorado.	7,765	20,830	22,080	48,350	8,300		2,430	12,730	430	300	11,647	100	52,801		187,523	187,523
Pajaro.	91,188	206,038	119,835	42,455	14,890		10,850	14,770	250	3,800	68,800		79,472	28,700	1,670	713,037
Quevedo.	60,453	134,820	90,490	32,645	18,185	270	1,800	11,350	410	53,600	68,800		109,364	4,000		677,037
Guayama.	56,700	401,700	113,280	57,445	28,881	10	15,833	38,080	1,960	12,800	22,470	500	13,650		16,300	779,389
Guayanilla.	2,853	94,756	31,740	19,398	12,082		2,460	8,080	760	3,100	1,760	40	34,914	46,492	2,770	259,875
Guaynabo.	3,819	12,768	23,440	22,063	6,837		3,650	10,380					13,960		350	108,469
Gurabo.	205	27,715	23,279	22,063	7,811		6,660	6,200	170	600			21,860			105,736
Hatillo.	1,145	16,741	34,800	44,695	16,075		5,010	10,700	860		1,129	80	11,712			168,499
Hormigueros.	1,000	4,508	4,819	4,670	4,630		5,010	1,410	660	15,200	17,238	100	25,600		144,383	122,554
Humacao.	55,892	185,890	63,650	38,518	11,850		4,180	39,300	1,430	22,400	2,440	660	101,019	11,980	3,850	583,933
Isabela.	290	40,290	34,815	17,830	410		5,435	6,450	1,000		1,440		28,458			165,223
Jayuya.	13,121	77,773	69,600	12,535	17,355	220	2,800	10,200	1,645	4,200	2,070	250	15,513		1,110	136,574
Juana Diaz.	1,705	69,610	56,145	28,145	28,145		2,510	10,200	1,645	4,200	2,070	250	15,513			306,293
Juncos.	11,543	95,060	90,865	24,856	10,229		5,160	12,550	1,265	3,000	6,885		9,776			267,248

TABLE No. 8.—Total assessed value of personal property, by municipalities and clauses, for the fiscal year 1918-19—Continued.

Municipality.	Money.	Machinery, raw material, and fixtures in establishments.	Work cattle.	Other cattle.	Horses, mules, and donkeys.	Other animals.	Carts drawn by animals.	Automobiles.	Coaches.	Portable track.	Machinery.	Hives.	Rolling stock.	Vessels.	Other property.	Total personal property.
Lajas.....	\$1,469	\$25,991	\$73,990	\$78,256	\$12,354		\$9,295	\$3,720	\$270	\$6,460	\$15,715	\$50	\$34,371		\$200	\$237,141
Lares.....	6,457	17,194	4,680	17,194	35,631		1,530	17,890	280		1,590	7,275			3,180	167,868
Las Marias.....		9,550	4,740	4,875	18,725	\$80	4,440	4,000	60		3,350	1,705				44,565
Las Piedras.....	745	8,355	28,850	23,652	4,843		1,080	12,950	100		15		20,819			88,419
Lola.....	1,000	29,740	40,520	24,646	16,646		3,055	12,250	110	240	2,450		26,294		700	222,254
Manatí.....	846	7,669	24,945	8,235	8,235		5,465	1,870	180		1,710		32,333		40	151,433
Manuel.....	34,767	287,175	40,185	48,100	15,350		5,108	34,050	540	11,500	28,890		53,439		77,646	638,780
Maricao.....	1,125	21,905	8,980	8,445	16,225		6,050	5,300	190		8,380	3,100				60,870
Mamabo.....	555	21,905	52,980	11,835	4,220		9,200	7,810	365	1,970	47,318		2,400	\$2,100		111,200
Mayaguez.....	419,738	1,655,374	25,310	20,695	22,085		9,200	113,531	3,270	5,285	47,318	4,120	38,474	49,685	71,522	2,486,555
Moca.....	1,900	10,310	12,503	8,145	6,910		2,670	7,810	210		1,140	1,750	7,320		380	53,900
Morovis.....	60	10,520	14,035	23,670	11,535	1,500	1,920	11,430	390	11,941	2,395	735	40,305	3,750	5,297	368,702
Naguabo.....	9,735	81,034	103,734	18,860	3,470	30	6,570	3,890	100		1,540	1,500	22,360	2,700	2,665	330,210
Narajuto.....		14,030	8,960	26,659	16,484	132	3,320	2,100	970	2,800	5,600		14,750			239,232
Pailinas.....	21,287	36,835	91,850	22,885	14,645		24,960	182,632	10,249	27,900	183,398		269,546	57,960	735,835	5,441,284
Penuelas.....	357,067	3,267,883	245,550	73,191	64,795		5,150	5,990	890		3,950		13,322			108,205
Quebradillas.....		28,810	22,970	16,495	10,145		4,025	5,250	200	10,000	3,950		21,365	100	100	206,227
Rincon.....	7,563	76,362	23,195	9,770	16,814		4,700	10,470	320	4,660	4,660		27,357	500		793,182
Rio Grande.....	4,290	56,910	71,850	67,216	16,814		6,615	54,787	1,525	8,690	31,090		155,657		137,538	783,182
Sabana Grande.....	1,549	43,741	30,290	20,785	19,043		4,105	11,310	440	4,350	401,382		31,200	16,000	1,720	729,660
Selinas.....	11,724	40,790	96,725	117,630	32,315		10,080	8,340	1,000	2,400	386,672		134,517	380,307	6,371	1,640,181
San German.....	13,018	230,074	48,390	33,930	22,200		10,460	30,240	490		1,570	1,250	2,400		166,605	589,507
San Juan.....	1,823,350	8,707,032	2,420	5,245	16,807		6,579	467,874	355		386,672		14,326		100	183,682
San Lorenzo.....		57,928	31,008	47,530	12,505		3,419	7,050	110		3,930	4,165	20,847		15,525	287,401
San Sebastian.....	7,723	71,012	27,550	31,175	20,860		8,800	11,950	660	15,700	27,100		26,947		1,110	191,133
Santa Isabel.....	2,051	35,656	88,550	35,495	16,365		1,975	6,320	560		1,483	250	8,804		10,429	159,208
Toa Alta.....	6,683	32,707	17,145	33,592	7,696		3,905	6,680	205	15,200	21,778		28,800	1,930	200	224,705
Trujillo Alto.....		8,300	16,005	33,558	41,655		3,810	3,750	360		210		91,138		732,856	1,043,455
Utuado.....	8,526	120,969	15,800	33,558	8,700		2,170	6,030	100	63,400	15,450		43,730		6,313	209,554
Vega Alta.....	11,560	97,110	49,260	14,010	8,700		3,480	19,650	370	9,000	8,172		48,984		39,291	490,402
Vega Baja.....	22,392	132,308	26,230	22,820	9,895		1,890	26,944			4,450		47,887	18,615		94,683
Vieques.....	31,937	86,667	161,901	45,105	15,635		1,390	26,944	220		200		2,480		27,620	463,024
Villalba.....	1,288	28,695	14,200	15,894	17,936		2,371	11,850	440	28,000	23,300		69,570	6,680		381,531
Yabucoa.....	34,774	102,016	42,927	43,928	14,385		4,190	15,870	1,110	3,620	6,180		19,115			111,200
Yauco.....	49,794	256,140	28,655	26,960	23,780											463,024
Total.....	3,606,319	21,177,963	3,327,064	2,672,351	1,271,492	12,090	371,735	1,787,631	56,662	449,026	1,529,178	57,025	2,662,975	678,748	9,160,677	48,848,911

TABLE No. 9. -Number of heads of live stock and vehicles and average value per unit.
[Corrected to Mar. 4, 1919.]

Municipality.	Work cattle.		Other cattle.		Horses, mules, and donkeys.		Other animals.		Carts drawn by animals.		Automobiles.		Coaches.		Hives.	
	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.
Adjudas.....	127	63.19	671	21.18	539	50.11	9	25.00	51	43.04	11	718.18	6	65.00	322	5.00
Aguada.....	638	57.26	443	23.39	218	30.76	74	44.89	10	395.00	10	472.37	8	48.00		
Aguadilla.....	823	54.33	1,155	23.71	373	37.71	177	34.59	49	472.37	10	472.37	9	50.00		
Aguas Buenas.....	369	60.81	1,338	19.25	949	30.46	3	5.00	17	64.71	13	1,033.71	6	43.33	150	6.00
Albionito.....	266	40.63	1,020	21.37	335	43.83	15	27.73	103	24.85	13	384.62	3	33.33	315	4.96
Anasco.....	1,921	52.69	3,063	22.74	156	45.72	11	5.45	456	50.02	155	221.43	10	56.00	141	6.67
Arecibo.....	1,921	52.69	3,063	22.74	156	45.72	11	5.45	456	50.02	155	221.43	10	56.00	141	6.67
Barceloneta.....	765	50.15	966	20.91	324	46.34	114	51.01	184	38.28	33	424.55	12	47.50	50	5.00
Barranquitas.....	76	44.59	800	19.06	177	33.95	4		4	40.00	14	688.21	1	50.00		
Barros.....	37	44.59	1,091	21.41	333	45.34									150	3.87
Bayamon.....	1,123	41.13	4,214	20.75	510	31.95	210	25.37	212	35.74	137	602.41	33	44.23		
Cabo Rojo.....	1,159	55.59	2,708	22.48	441	33.81	1	50.00	309	35.57	30	346.37	8	38.75	62	4.82
Caguas.....	2,245	56.08	2,793	22.21	698	33.81	35	27.26	267	51.39	143	531.89	45	65.76	150	5.00
Camuy.....	844	48.15	1,168	22.96	506	39.05			305	28.26	9	372.22	29	50.86		
Carolina.....	1,023	50.72	4,941	26.70	542	34.75			99	35.03	39	373.85	9	56.11		
Cayey.....	1,253	47.17	1,240	21.66	646	57.21	33	19.00	61	55.41	80	713.50	9	60.00	80	5.00
Cayula.....	386	110.13	640	22.74	144	45.97			100	41.80	7	278.57	6	83.33		
Cidra.....	166	48.18	1,174	18.57	682	44.44			21	53.81	19	342.63	1	50.00	930	5.00
Cidra.....	467	48.39	1,068	20.87	253	31.88			18	41.67	11	462.27	2	50.00	34	2.94
Coamo.....	650	49.95	3,143	22.77	984	46.03	21	4.05	44	76.67	32	508.28	15	93.33	131	8.78
Coamo.....	331	57.76	7,837	20.46	253	68.45	8	32.25	9	44.00	28	652.21	3	33.33	270	6.48
Corozal.....	243	43.83	1,925	17.81	268	33.96			18	28.80	13	790.23			300	5.67
Culebra.....	40	37.50	2,002	29.05	205	22.22	80	1.87								
Culebra.....	425	61.95	1,653	29.25	204	40.59			58	41.90	21	608.57	10	43.00	20	5.00
Dorado.....	1,863	64.38	1,653	32.26	266	50.00			267	40.94	46	308.04	8	50.00		
Florida.....	1,209	73.26	1,316	21.16	217	65.37	3	50.00	40	49.73	28	495.36	9	67.78		
Guacima.....	2,181	51.94	2,230	25.76	668	43.19	10	1.00	324	49.13	74	514.73	27	72.59	110	4.55
Guayanilla.....	466	52.38	1,601	22.91	299	40.41			46	38.83	14	577.14	15	57.67		
Guayanilla.....	530	53.66	1,601	22.91	299	40.41			96	38.32	20	476.92	3	56.67	15	2.67
Guaynabo.....	384	45.91	1,202	19.37	245	29.85			23	28.70	13	823.08	11	50.00	41	1.96
Guaynabo.....	688	50.88	1,915	23.84	466	44.10			157	43.09	13	470.00	8	70.00	25	4.00
Hatillo.....	602	67.79	1,252	21.80	352	32.34			98	42.14	66	598.82	7	49.86	132	5.00
Hormigueros.....	1,192	53.40	1,537	21.80	352	32.34	5	82.00	122	44.55	15	363.33	23	70.44	414	5.00
Humacao.....	749	46.80	1,436	23.73	531	32.58			50	46.90	1	200.00	7	57.14		
Isabela.....	173	56.07	632	20.14	360	49.50			50	46.90	27	378.89	36	45.69	80	5.00
Jayuya.....	1,375	50.62	2,503	22.08	660	46.30	110	2.00	112	46.90	1	372.19	4	66.25		
Juana Diaz.....	3,307	27.49	1,216	20.03	327	31.26			135	38.22	32	392.10	4	45.00		
Juncos.....	1,314	60.11	3,198	24.47	311	39.72			242	38.41	10	372.10	6	45.00	10	5.00

TABLE NO. 9.—Number of heads of live stock and vehicles and average value per unit—Continued.

Municipality.	Work cattle.		Other cattle.		Horses, mules, and donkeys.		Other animals.		Carts drawn by animals.		Automobiles.		Coaches.		Hives.	
	Num-ber.	Aver- age.	Num-ber.	Aver- age.	Num-ber.	Aver- age.	Num-ber.	Aver- age.	Num-ber.	Aver- age.	Num-ber.	Aver- age.	Num-ber.	Aver- age.	Num-ber.	Aver- age.
Lares.....	105	44.57	828	20.77	754	47.26	3	20.00	33	46.36	22	811.82	4	70.00	1,535	4.74
Las Marias.....	35	49.71	183	26.64	980	21.77	14	31.36	14	31.36	3	1,343.33	2	30.00	206	8.28
Las Piedras.....	630	45.79	189	20.30	189	25.62	34	32.06	34	32.06	3	318.67	1	100.00	.....	.....
Lota.....	754	53.74	3,282	24.16	525	31.71	81	37.72	81	37.72	30	408.33	2	55.00	.....	.....
Manatí.....	910	69.43	804	31.03	158	32.12	119	46.92	119	46.92	6	311.67	4	45.00	.....	.....
Manatí.....	844	47.62	2,273	21.16	429	35.78	134	38.12	134	38.12	7	486.43	12	45.00	.....	.....
Maricao.....	18	53.33	155	22.23	285	56.96	4	37.50	4	37.50	70	757.14	3	63.33	674	4.73
Mayaguez.....	883	59.45	605	19.56	148	28.58	116	52.16	116	52.16	8	976.25	6	60.83	.....	.....
Mayaguez.....	513	49.34	984	21.03	570	40.32	245	37.55	245	37.55	190	697.53	50	63.40	707	5.83
Moca.....	276	45.31	395	20.62	200	32.40	300	5.00	78	34.23	3	270.00	4	52.50	.....	.....
Morovis.....	286	47.48	1,425	20.12	356	47.29	49	33.06	49	33.06	14	511.43	7	55.71	.....	.....
Naguabo.....	1,676	61.89	2,270	29.08	319	29.57	12	2.50	123	45.20	27	423.33	7	100.00	.....	.....
Naranjito.....	201	44.08	1,000	18.98	185	29.57	5	2.75	5	38.00	11	353.64	15	64.67	.....	.....
Pailitas.....	1,445	63.36	1,173	22.73	505	32.64	48	2.75	192	40.26	13	415.38	15	64.67	.....	.....
Penuelas.....	1,734	48.94	1,041	21.98	367	39.90	69	48.12	69	48.12	8	262.50	7	48.57	.....	.....
Ponce.....	4,197	58.51	2,965	24.68	1,202	53.91	551	45.34	551	45.34	368	496.28	112	91.51	170	5.00
Quebradillas.....	488	47.07	673	24.51	281	33.87	111	46.40	111	46.40	13	457.69	16	55.63	.....	.....
Rincon.....	377	61.53	432	22.62	157	43.47	104	38.70	104	38.70	9	583.33	4	50.71	.....	.....
Rio Grande.....	1,216	59.09	2,739	24.54	385	43.67	114	43.67	114	43.67	18	581.67	7	46.00	.....	.....
Rio Piedras.....	1,013	61.70	2,123	23.28	440	43.28	183	36.15	183	36.15	22	514.09	36	42.36	20	2.50
Sabana Grande.....	1,335	56.60	925	23.47	233	38.88	20	5.00	101	40.64	22	576.09	7	62.86	70	4.20
Salinas.....	1,945	50.78	1,655	23.27	892	38.23	.....	.....	227	39.77	29	572.86	18	53.80	.....	.....
San German.....	1,982	49.27	1,000	22.53	522	42.53	59	6.00	263	39.77	63	614.42	13	64.92	250	5.00
San Juan.....	47	51.49	216	24.29	220	71.77	1	5.00	109	31.41	11	894.12	11	32.27	.....	.....
San Lorenzo.....	750	41.47	2,533	18.75	459	28.09	.....	.....	71	31.41	12	587.50	12	55.00	100	4.05
San Sebastian.....	492	54.02	1,704	18.31	538	38.77	45	52.60	45	52.60	17	371.11	2	32.77	849	4.91
Santa Isabel.....	1,877	54.16	1,294	27.45	347	47.16	.....	.....	192	34.65	25	476.00	13	56.77	.....	.....
Tor Alto.....	382	44.88	1,708	19.37	239	33.70	4	31.25	57	34.65	17	371.11	12	46.67	50	5.00
Tor Alto.....	384	51.49	1,969	24.60	160	48.04	14	5.00	107	36.50	5	234.00	5	35.91	80	5.00
Trujillo Alto.....	318	41.68	1,516	20.87	305	28.97	180	2.86	85	44.82	9	416.67	8	45.00	20	2.50
Utuado.....	696	70.57	1,785	17.86	987	42.30	10	8.00	91	38.24	24	194.52	2	50.00	1,245	3.92
Vega Alta.....	513	51.13	1,124	20.12	285	34.72	.....	.....	210	42.81	45	427.17	7	52.86	.....	.....
Vega Baja.....	2,864	66.53	1,752	24.38	454	34.44	.....	.....	30	46.00	2	400.00	16	61.88	736	3.37
Vieques.....	291	49.11	752	22.47	391	45.92	10	4.00	57	41.00	23	515.22	5	44.00	86	2.50
Villalba.....	4,665	50.63	1,986	22.12	438	29.76	.....	.....	90	46.56	34	466.76	42	26.43	.....	.....
Yabucoa.....	566	50.63	1,209	22.29	567	41.94	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	65,887	50.50	116,072	23.02	30,946	41.09	1,220	9.85	8,777	42.35	2,343	534.74	962	58.93	12,104	4.71

TABLE 10.—Comparative statement of the normal and additional income taxes and amounts withheld at the source assessed against individuals and corporations for the years 1913, 1914, 1915, 1916, 1917, and 1918, as per assessments made up to June 30, 1919.

Class of levy.	1913			1914			1915			
	Separate assessments.	Rate per cent.	Individuals.	Corporations.	Total.	Separate assessments.	Rate per cent.	Individuals.	Corporations.	Total.
Normal tax—										
Additional on net income—	1,183	1	34,993.38		34,993.38	1,029	1	33,592.48		33,592.48
From \$20,000 to \$40,000.										
From \$40,000 to \$60,000.	20	1	1,476.83		1,476.83	39	1	3,026.93		3,026.93
From \$60,000 to \$75,000.										
From \$75,000 to \$80,000.										
From \$80,000 to \$100,000.										
From \$100,000 to \$150,000.										
From \$150,000 to \$250,000.										
From \$250,000 to \$300,000.										
From \$300,000 to \$500,000.										
Normal tax—										
From \$1 to \$50,000.	160	1		14,825.82	14,825.82	130	1		12,939.57	12,939.57
From \$50,000 to \$100,000.	8	1		5,367.73	5,367.73	7	1		5,752.42	5,752.42
From \$100,000 to \$200,000.	1	1		1,005.78	1,005.78	3	1		4,084.46	4,084.46
From \$200,000 to \$500,000.	3	1		10,516.64	10,516.64	4	1		12,952.78	12,952.78
Additional tax on undistributed net income.										
Tax withheld at the source.	66	1	1,978.43		1,978.43	163	1	6,309.30		6,309.30
Total.			38,448.64	32,206.87	70,655.51			42,928.71	35,729.23	78,657.94
Receipts canceled.	42		1,234.77	2,597.14	3,831.91	10		562.29	261.93	824.22
Net.			37,213.87	29,609.73	66,823.60			42,366.42	35,467.30	77,833.72

TABLE 10.—Comparative statement of the normal and additional income taxes and amounts withheld at the source assessed against individuals and corporations for the years 1915, 1914, 1915, 1916, 1917, and 1918, as per assessments made up to June 30, 1919—Continued.

Class of levy.	1916					1917					1918				
	Sep- arate assess- ments.	Rate per cent.	Individ- uals.	Corpora- tions.	Total.	Sep- arate assess- ments.	Rate per cent.	Individ- uals.	Corpora- tions.	Total.	Sep- arate assess- ments.	Rate per cent.	Individ- uals.	Corpora- tions.	Total.
Normal tax.	978	2	163,020.68		163,020.68	1,632	2	216,605.94		216,605.94					
Additional on net income:															
From \$20,000 to \$40,000.....	148	1	18,403.29		18,403.29	211	1	22,932.93		22,932.93					
From \$40,000 to \$60,000.....	58	2	19,961.28		19,961.28	61	2	18,168.91		18,168.91					
From \$60,000 to \$75,000.....															
From \$75,000 to \$100,000.....	41	3	19,655.50		19,655.50	38	3	14,194.18		14,194.18					
From \$100,000 to \$150,000.....	24	4	14,499.69		14,499.69	16	4	9,878.95		9,878.95					
From \$150,000 to \$200,000.....	15	5	27,213.49		27,213.49	5	5	16,279.59		16,279.59					
From \$200,000 to \$250,000.....															
From \$250,000 to \$300,000.....	8	6	17,614.24		17,614.24	2	6	4,144.71		4,144.71					
From \$300,000 to \$500,000.....	3	7	8,948.64		8,948.64	1	7	288.68		288.68					
From \$500,000 to \$500,000.....	1	8	4,000.00		4,000.00										
From \$500,000 to \$500,000.....	1	9	8,655.23		8,655.23										
Normal tax:															
From \$1 to \$50,000.....	101	2	20,573.53		20,573.53	136	2		27,948.41	27,948.41	31	2		7,517.88	7,517.88
From \$50,000 to \$100,000.....	12	2	16,018.37		16,018.37	17	2		24,945.20	24,945.20	2	2		2,986.34	2,986.34
From \$100,000 to \$200,000.....	14	2	40,595.38		40,595.38	13	2		31,823.89	31,823.89	7	2		16,407.87	16,407.87
From \$200,000 to \$500,000.....	14	2	78,853.39		78,853.39	12	2		74,108.48	74,108.48	6	2		35,812.70	35,812.70
From \$500,000 or over.....	5	2	98,182.67		98,182.67	6	2		100,014.99	100,014.99	2	2		45,536.57	45,536.57
Additional tax on undistrib- uted net income.....															
Tax withheld at the source.....	219	1	9,314.02		9,314.02	21	10	10,419.22		10,419.22	84	2	2,586.20	7,713.98	10,300.18
Total															
Receipts canceled.....	13		310,586.06	220,140.99	560,727.05			312,913.11	267,919.48	580,832.59			2,586.20	116,176.34	118,761.54
			21,392.98	3,120.11	24,513.09	22		1,447.15	1,616.51	3,063.66	1			1,961.32	1,961.32
Net			289,193.08	247,020.88	536,213.96			311,465.96	266,302.97	577,768.93			2,586.20	114,224.02	116,810.22

TABLE No. II.—Statement of income tax assessed up to June 30, 1919, for the fiscal year 1917-18 under act No. 59, approved Dec. 4, 1917.

Municipality.	Individuals.		Partnerships.		Total tax assessed.
	Receipts issued.	Tax assessed up to June 30, 1919.	Receipts issued.	Tax assessed up to June 30, 1919.	
Adjuntas.....	3	\$23.80	5	\$185.70	\$209.50
Aguada.....	7	90.53	2	123.50	214.03
Aguadilla.....	24	538.44	7	284.25	822.69
Agua Buenas.....	3	78.48			78.48
Albionito.....	2	53.55			53.55
Anasco.....	8	87.93	2	11.60	99.53
Arecibo.....	79	2,627.45	26	4,850.04	7,377.49
Arroyo.....	20	482.82	3	9,473.35	9,956.17
Barceloneta.....	8	76.67	3	798.30	874.97
Barranquitas.....	1	7.68	1	82.13	89.81
Barros.....	1	3.57	1	15.18	18.75
Bayamon.....	56	1,493.30	16	1,125.70	2,619.00
Cabo Rojo.....	7	62.60			62.60
Caguas.....	45	903.36	9	1,160.02	2,063.38
Camuy.....	11	155.98			155.98
Carolina.....	12	239.63	1	72.70	312.33
Cayey.....	22	363.88	3	188.28	552.16
Ciales.....	18	252.96	7	963.26	1,216.22
Cidra.....					
Coamo.....	16	749.51	3	830.85	1,580.36
Comerio.....	7	71.14	4	294.20	365.34
Corozal.....	2	42.95	2	164.00	206.95
Dorado.....	5	118.60	2	186.11	304.71
Fajardo.....	37	1,557.16	7	465.24	2,022.40
Guayama.....	41	887.40	14	12,828.04	13,715.44
Guayanilla.....	11	203.12	3	4,604.67	4,807.79
Guaynabo.....	2	50.14	1	16.75	66.89
Gurabo.....	6	135.31	1	14.38	149.69
Hatillo.....	6	70.91			70.91
Humacao.....	27	950.62	12	740.07	1,690.69
Isabela.....	2	7.35			7.35
Jayuya.....	4	46.61	5	228.40	275.01
Juana Diaz.....	10	186.65	7	188.21	374.86
Juncos.....	21	751.42	3	176.61	928.03
Lares.....	15	237.71	9	400.02	637.73
Las Marias.....					
Loiza.....	10	306.45			306.45
Manati.....	37	1,426.08	10	338.10	1,764.18
Maricao.....	1	1.74	2	38.28	40.02
Mamabo.....	1	65.23	3	9,243.50	9,308.82
Mayaguez.....	88	2,139.48	20	5,285.38	7,424.86
Morovis.....	8	63.50			63.50
Naguabo.....	13	954.30	4	355.58	1,309.88
Naranjito.....			2	130.19	130.19
Patillas.....	3	92.54	1	252.10	344.64
Penuelas.....	6	75.84			75.84
Ponce.....	188	10,787.65	51	55,045.21	65,832.86
Quebradillas.....	7	158.49			158.49
Rio Grande.....	8	171.61	5	147.77	319.38
Rio Piedras.....	37	906.12	6	211.45	1,117.57
Sabana Grande.....	9	141.37	3	194.92	336.29
Salinas.....	26	4,462.19	3	146.69	4,608.78
San German.....	55	1,778.47	6	446.15	2,224.62
San Juan.....	623	26,091.73	117	50,656.23	76,747.96
San Lorenzo.....	6	138.21	2	167.53	305.74
San Sebastian.....	4	18.38	5	246.07	264.45
Santa Isabel.....	6	180.79			180.79
Toa Alta.....	7	87.86	1	12.62	100.48
Toa Baja.....	10	223.30	5	1,109.15	1,332.45
Trujillo Alto.....	4	61.68			61.68
Ututo.....	6	36.29	5	353.29	389.58
Vega Alta.....	7	72.76	3	84.38	157.14
Vega Baja.....	14	270.63	5	368.17	638.80
Vieques.....	13	437.44	1	13.70	451.14
Villalba.....					
Yabucoa.....	14	302.74	4	327.86	630.60
Yauco.....	53	5,660.42	11	1,308.07	6,968.49
Total.....	1,803	70,622.52	434	166,953.94	237,576.46
Corporations.....	157				474,414.46
Grand total.....	1,960	70,622.52	434	166,953.94	711,990.92
Receipts canceled.....	6	89.62	2	14,563.24	14,652.86
Receipts canceled, corporations.....	4	70,532.90		152,390.70	697,338.06
					91,778.45
					605,559.61

TABLE No. 12.—*Statement of taxable income and tax assessed for the fiscal year 1917-18, under the insular income tax law No. 59, as per assessments made up to June 30, 1919.*

Graduated rates.	Corporations.		Partnerships.		Individuals.		Total.
	Taxable income.	Amount of tax.	Taxable income.	Amount of tax.	Taxable income.	Amount of tax.	
1 per cent on exceeding \$2,000 and not exceeding \$25,000...	\$3,198,274.53	\$21,982.74	\$4,111,535.63	\$41,115.37	\$5,177,187.69	\$51,771.93	\$114,870.04
2 per cent on exceeding \$25,000 and not exceeding \$50,000...	1,261,932.32	25,238.63	1,509,164.36	30,183.30	258,175.36	5,163.51	60,585.44
3 per cent on exceeding \$50,000 and not exceeding \$75,000...	846,705.99	25,401.18	770,359.53	23,110.79	134,024.65	4,020.74	52,532.71
4 per cent on exceeding \$75,000.....	10,044,797.91	406,791.91	1,813,611.82	72,544.48	241,658.52	9,666.34	484,002.72
Grand total.....		474,414.46		166,953.94		70,622.52	711,990.92
Receipts canceled.....		91,778.45		14,563.24		89.62	106,431.31
		382,636.01		152,390.70		70,532.90	605,559.61

TABLE No. 13.—*Comparative statement of receipts of all municipalities in 1917-18 and 1918-19.*

Items.	1917-18		1918-19	
	Total.	Ordinary funds.	Total.	Ordinary funds.
GENERAL REVENUES.				
Taxes.....	\$1,415,863.78		\$1,490,280.21	
Property taxes, general funds.....		\$1,102,635.61		\$1,133,817.05
Tax on sale and slaughter of meat.....		107,042.57		126,000.83
Business licenses.....		200,802.77		224,368.12
Dog and other licenses.....		5,382.83		6,594.21
Public service enterprises.....	252,607.23		290,204.57	
Water supply systems.....		205,140.99		240,098.67
Electric light plants.....		26,260.57		29,628.42
Piers and docks.....		21,205.67		20,477.48
Use of municipal property.....	110,683.89		125,190.23	
Sewers.....		2,586.51		2,820.99
Markets.....		37,152.38		42,618.01
Meat shops.....		12,799.72		14,611.72
Slaughterhouses.....		15,726.89		18,187.84
Animal pounds.....		10,234.31		11,147.01
Cemeteries.....		9,923.51		12,862.05
Municipal lots.....		1,394.88		460.11
Theaters.....		2,364.42		2,844.06
Hospitals (pay patients).....		9,712.16		9,708.44
Other property.....		8,839.11		8,930.10
Miscellaneous.....	22,192.98		25,020.24	
Privileges.....		1,639.04		1,736.57
Permits.....		1,238.53		1,343.18
Fees.....		9,687.48		9,779.20
Fines.....		190.50		8.00
Interest.....		8,695.49		12,142.24
Other current receipts.....		741.94		11.05
Total general revenues.....	1,801,347.88		1,930,695.35	
Repayments.....	40,346.28		62,361.87	
Maintenance of insular prisoners.....		36,285.59		29,964.23
Transportation of patients to asylums.....		233.14		42.57
Other repayments.....		3,827.55		32,363.07
Receipts not current.....	39,541.79		70,138.00	
Sales.....		4,167.27		3,918.60
Grants, donations, etc.....		19,761.54		16,727.43
Miscellaneous.....		15,612.98		49,492.06
Total receipts, ordinary funds.....		1,881,235.95		2,063,195.31

TABLE NO. 13.—*Comparative statement of receipts of all municipalities in 1917-18 and 1918-19—Continued.*

Items.	1917-18		1918-19	
	Total.	Ordinary funds.	Total.	Ordinary funds.
SPECIAL FUNDS.				
Road funds.....	\$122,421.64		\$125,983.42	
Property tax.....				
Loan redemption funds.....	9,060.83		23,303.52	
Property tax.....				
Interest on redemption fund.....				
Loans.....	900,444.11		299,167.27	
Proceeds of loans.....				
Interest on loan funds.....				
Total special funds.....	1,031,926.58		448,454.21	
Total receipts, all sources.....	2,913,162.53	1,881,235.95	2,511,649.52	2,063,195.31

TABLE NO. 14.—*Gross receipts of municipalities, detailed by sources and destination, fiscal year 1918-19.*

Items.	Total.	Ordinary funds.	Road funds.	Loan redemption funds.	Proceeds of loans.
GENERAL REVENUES (\$2,063,195.31).					
Taxes.....	\$1,490,280.21				
Property taxes, general funds.....		\$1,133,317.05			
Tax on sale and slaughter of meat.....		126,000.83			
Business licenses.....		224,368.12			
Dog and other licenses.....		6,594.21			
Public service enterprises.....	290,204.57				
Water-supply systems.....		240,098.67			
Electric light plants.....		29,628.42			
Piers and docks.....		20,477.48			
Use of municipal property.....	125,190.33				
Sewers.....		2,820.99			
Markets.....		42,618.01			
Meat shops.....		14,611.72			
Slaughterhouses.....		18,187.84			
Animal pounds.....		11,147.01			
Cemeteries.....		13,862.05			
Municipal lots.....		460.11			
Theaters.....		2,844.06			
Hospitals (pay patients).....		9,708.44			
Other property.....		8,930.10			
Miscellaneous.....	25,020.24				
Privileges.....		1,734.87			
Permits.....		1,343.18			
Fees.....		9,779.20			
Fines.....		8.00			
Interest.....		12,142.24			
Other current receipts.....		11.05			
Repayments.....	62,361.87				
Maintenance of insular prisoners.....		29,966.23			
Transportation of patients to asylums.....		42.57			
Other repayments.....		32,363.07			
Receipts not current.....	70,138.09				
Sales.....		3,918.60			
Grants, donations, etc.....		16,727.43			
Miscellaneous.....		49,492.06			
SPECIAL FUNDS (\$448,454.21).					
Road funds.....	125,983.42				
Property tax.....			\$125,983.42		
Loan redemption funds.....	23,303.52				
Property tax.....				\$23,299.89	
Interest on redemption fund.....				3.63	
Loans.....					
Proceeds of loans.....					\$299,167.27
Interest on loan funds.....					
Total receipts, all sources.....	2,511,649.52	2,063,195.31	125,983.42	23,303.52	299,167.27
Cash balance, beginning of year.....	515,420.51	166,747.35	60,071.54	12,281.13	276,320.40
Total available for expenditures.....	3,027,070.03	2,229,942.66	186,054.96	35,584.65	575,487.76
Total expenditures during the year.....	2,572,678.50	2,075,860.02	117,434.90	22,358.51	357,026.07
Cash on hand at end of year.....	454,391.53	154,082.64	68,620.06	13,226.14	218,462.69

TABLE No. 15.—Detailed expenditures of municipalities, fiscal year 1918-19.

Purpose.	Current expenses.				Outlays.		Indebtedness.		Total from current income.	Additional from special tax.	Additional from loans.	Grand total.
	Total.	Salaries and supervision.	Repairs and maintenance.	Supplies, materials, incidentals.	Construction and improvements.	Property and equipment.	Floating.	Funded.				
								Interest.	Principal.			
General government.....	\$445,047.60	\$351,900.14	\$28,399.31	\$64,748.15	\$2,383.10	\$5,288.52	\$2,812.62				\$1,280.00	\$456,832.53
Executive and finance offices.....	319,402.69	272,206.54	140.30	46,995.85		3,424.55	885.13					323,712.37
Legal services and costs.....	4,200.15	3,373.50		826.65			1,232.32					5,432.47
Courts.....	44,744.58	44,140.38		604.20		14.21	196.00					44,983.79
Civil register.....	27,806.90	27,399.21		407.69			11.00					27,817.90
Municipal buildings.....	34,152.59	2,774.48	28,256.01	3,119.10	2,383.10	547.00	296.48				1,280.00	38,690.87
Traveling expenses.....	14,740.69	1,916.00		12,824.69		1,312.76	192.68					16,246.13
Fire departments.....	21,978.30	20,202.92	47.93	1,727.45		3,969.50	37.79					25,985.59
Health conservation and sanitation.....	302,328.24	198,240.53	104.51	103,983.20		635.79	3,700.09				29,333.00	335,997.72
Insular supervision.....	118,832.42	118,832.42										122,532.51
Street cleaning and refuse disposal.....	180,873.17	77,505.61	15.61	103,291.92		425.16	3,700.09					181,298.30
Street sprinkling.....	32.00			32.00								32.00
Sewer systems.....	972.94	682.50	41.40	249.04		210.63					29,333.00	30,517.17
Miscellaneous.....	1,657.74	1,200.00	47.50	410.21								1,657.74
Highways.....	338,769.52	21,057.89	146,436.19	168,275.44	16,410.39	903.19	17,651.44				142,338.05	516,063.59
Streets, sidewalks, and plazas.....	68,781.73	12,403.69	50,662.88	5,715.15	6,899.01	100.95	15,361.32					233,402.09
Street lighting.....	161,376.58	3,319.50	20.00	158,046.08	1,195.66	381.24	2,270.12					168,226.60
Rural roads.....	108,606.21	8,331.70	95,753.30	4,520.21	2,385.69	421.00	20.00					117,434.90
Charities.....	502,615.66	251,707.48	1,019.45	249,888.73	8,558.01	5,055.67	3,700.31				9,717.20	539,646.88
Outdoor poor relief.....	126,242.87	109,645.09		16,597.78		137.40	40.00					126,410.27
Relief stations and hospitals.....	259,678.18	122,616.51	1,019.45	116,012.17	8,558.04	4,802.39	2,022.12				8,854.00	263,915.31
Dispensaries.....	61,465.88	17,852.25		43,613.63		125.88	1,018.32					62,610.08
Medicines.....	45,036.05			45,036.05			296.87					45,331.92
Poor in institutions.....	14,110.07	1,283.60		12,826.47		14,110.07					862.60	14,972.67
Miscellaneous charities.....	16,063.68	300.00		15,763.68			323.00					16,406.68
Corrections, jails.....	38,330.30	24,310.20	10.75	14,009.35	1,304.47	43.05	8.36				489.20	40,175.47

Education.....	8,065.58	4,406.02	3,652.56	7.00	8,065.58	8,065.58
Scholarships.....	3,194.42		3,194.42		3,194.42	3,194.42
Libraries.....	4,714.16	4,406.02	308.14	7.00	4,721.16	4,721.16
Miscellaneous, not obligatory.....	150.00		150.00		150.00	150.00
Recreation.....	27,072.33	25,783.04	29.00	278.30	27,350.63	27,350.63
Bands and concerts.....	27,072.33	25,783.04	29.00	278.30	27,350.63	27,350.63
Celebrations and entertainments.....						
Miscellaneous.....						
Municipal property.....	215,235.72	78,814.09	60,611.30	664.62	229,126.14	229,126.14
Water-supply systems.....	101,383.03	37,072.04	58,710.07	1.75	108,380.37	108,380.37
Electric-light plants.....	19,702.38	5,446.32	682.50	160.03	25,891.22	25,891.22
Piers and docks.....	49,125.98		49,125.98		49,125.98	49,125.98
Markets.....	7,570.07	7,205.81	34.61		7,981.40	7,981.40
Meat shops.....	5,140.98	3,736.42	169.27	47.26	6,081.14	6,081.14
Slaughterhouses.....	6,106.93	5,308.00	56.75	216.92	7,574.17	7,574.17
Cemeteries.....	21,202.39	19,209.51	921.75	1,468.24	22,138.90	22,138.90
Animal pounds.....	1,274.41	285.96	80	29.60	1,274.41	1,274.41
Theaters.....	730.55	540.00	65.55		730.55	730.55
Others.....			125.00			
Miscellaneous.....	14,341.93	4,241.20	10,100.73	238.00	207,196.62	207,196.62
Total.....	1,913,778.18	983,663.51	236,688.44	36,191.99	2,183,294.92	2,183,294.92
Indebtedness:						
Flating.....			33,668.42	17,086.64	57,984.21	57,984.21
Funded, interest.....			7,971.12	339.05	57,984.21	57,984.21
Funded, principal.....	27,884.82	3,895.09	15,680.81		134,582.48	134,582.48
Outlays:						
Construction and improvements.....			33,668.42		33,668.42	33,668.42
Property and equipment.....				17,086.64	17,086.64	17,086.64
Total.....					357,025.07	357,025.07
Total.....					2,540,320.00	2,540,320.00

TABLE NO. 16.—*Outstanding indebtedness, detailed by municipalities, June 30, 1919.*

	Fixed indebtedness.				
	Total.	Floating.	Current.	To insular government and trust funds.	Bonded indebtedness.
Grand total.....	\$2,218,586.33	\$94,973.79	\$7,631.64	\$49,397.79	\$2,066,583.11
Adjuntas.....	1,247.28	1,066.80	180.48		
Aguadilla.....	94,837.91	350.00	3,237.91	6,250.00	85,000.00
Aguas Buenas.....	1,678.20			1,678.20	
Aibonito.....	13,400.00			2,400.00	11,000.00
Añasco.....	279.50		279.50		
Arecibo.....	140.15		140.15		
Arroyo.....	18,187.68				18,187.68
Barceloneta.....	2,000.00				2,000.00
Barranquitas.....	6,853.06				6,853.06
Bayamon.....	8,000.00				8,000.00
Cabo Rojo.....	282.75	282.75			
Caguas.....	70,419.09		419.09		70,000.00
Camuy.....	50.00	50.00			
Cayey.....	32,500.00				32,500.00
Ciales.....	21,000.00				21,000.00
Coamo.....	5,000.00				5,000.00
Comerio.....	10,000.00				10,000.00
Corozal.....	4,200.00			4,200.00	
Dorado.....	4,500.00				4,500.00
Fajardo.....	91,500.00			9,000.00	82,500.00
Guayama.....	125,673.78	49,916.42		4,000.00	71,757.36
Guayanilla.....	15,500.00			500.00	15,000.00
Gurabo.....	18,130.00			1,130.00	17,000.00
Humacao.....	49,000.00				49,000.00
Isabela.....	2,800.04		300.04	2,500.00	
Jayuya.....	1,600.00	100.00			1,500.00
Juncos.....	28,000.00				28,000.00
Lares.....	48,500.00	500.00			48,000.00
Mayaguez.....	8,703.84			8,703.84	
Moca.....	142.81	142.81			
Morovis.....	64.50		64.50		
Naranjito.....	700.00			700.00	
Patillas.....	2,405.75			2,405.75	
Peñuelas.....	11,250.00			500.00	10,750.00
Ponce.....	372,427.70	7,427.70			365,000.00
Quebradillas.....	680.00			680.00	
Rio Grande.....	330.48	330.48			
Rio Piedras.....	8,234.75		234.75		8,000.00
Salinas.....	23,895.00	4,395.00		3,000.00	16,500.00
San Juan.....	1,006,945.84	30,410.83			1,976,535.01
San Lorenzo.....	1,700.00			700.00	1,000.00
San Sebastian.....	9,000.00				9,000.00
Toa Alta.....	1,050.00			1,050.00	
Toa Baja.....	7,000.00				7,000.00
Vega Alta.....	4,000.00				4,000.00
Vieques.....	19,500.00				19,500.00
Yauco.....	65,275.22		2,775.22		62,500.00

¹ Independent bond issues.

TABLE NO. 17.—Comparative statement showing sources of excise taxation in Porto Rico, the quantity of merchandise in the case of specific and the value thereof in the case of ad valorem tax levied, tax paid during the past four fiscal years and the amount of such tax collected, including licenses and miscellaneous.

	1915-16		1916-17		1917-18	
	Quantity or value.	Tax.	Quantity or value.	Tax.	Quantity or value.	Tax.
Distilled spirits:						
Domestic.....liters..	1,782,947	\$891,473.50	1,905,803	\$952,901.46	418,845	\$209,423.21
Imported.....do.....	43,849	21,924.49	47,566	23,782.43	30,500	15,280.46
Contained in medicines, cosmetics, lotions, toilet waters.....liters..	15,350	4,300.70	23,708	6,638.31	28,498	7,979.56
Near beer:						
Domestic.....do.....	612,805	43,311.69	847,606	61,006.36	704,742	50,775.53
Imported.....do.....	897,336	89,733.69	823,457	82,345.64	345,096	34,569.64
Still wines.....do.....	543,723	54,372.37	607,111	60,711.04	182,011	18,201.08
Sparkling wines.....do.....	3,473	1,739.20	2,034	1,016.80	2,143	1,071.20
Champagne.....do.....	3,567	3,567.90	4,507	4,507.00	4,226	4,225.47
Cigars.....each.....	109,180,286	324,532.59	125,212,544	346,523.73	108,427,065	321,325.97
Cigarettes (domestic and imported).....each.....	308,025,865	616,051.73	349,043,280	698,086.56	362,550,190	725,100.38
Perfumery.....value..	\$88,601.00	13,308.70	\$110,251.00	16,537.73	\$171,386	17,138.55
Patent medicines (domestic and imported).....value..	\$426,093.00	42,609.36	\$637,372.00	63,737.26	\$659,334	65,933.46
Cosmetics, lotions, toilet waters, etc. (domestic and imported), value.....	\$56,202.00	5,620.22	\$95,036.50	9,508.65	\$118,956	11,895.46
Arms and ammunitions.....value..	\$21,340.70	8,536.30	\$21,162.50	8,465.02	\$23,922	9,568.87
Playing cards.....packs.....	27,707	6,926.75	49,896	12,474.00	50,646	12,661.50
Matches.....gross boxes.....	258,530	51,706.02	141,608	28,333.58	281,717	56,343.39
Prepared smoking and fine-cut chewing tobacco.....ounces.....	181,862	5,455.86	187,815	5,634.45	162,458	4,872.74
Internal revenue licenses.....	239,363.00	.....	228,136.00	.....	191,967.25	191,967.25
Opium licenses.....	697.02	.....	684.77	.....	.....	658.62
Physicians' licenses (alcohol).....	.....	.....	.....	.....	.....	203.00
Miscellaneous receipts.....	252,384.43	.....	279,956.16	.....	.....	321,599.56
Motor vehicles and accessories (imported).....value.....	.....	.....	.....	.....	\$567,091.60	28,354.58
Phonographs and accessories (imported).....value.....	.....	.....	.....	.....	\$7,517.60	375.88
Pianos, pianolas, and accessories (imported).....value.....	.....	.....	.....	.....	\$13,998.40	699.92
Moving-picture films, (imported).....do.....	.....	.....	.....	.....	\$20,080.80	1,049.49
Gems and precious stones (imported).....value.....	.....	.....	.....	.....	\$4.70	.47
Photographic cameras and accessories (imported).....value.....	.....	.....	.....	.....	.....	.....
Billiard tables and accessories (imported).....value.....	.....	.....	.....	.....	.....	.....
Guarantee stamps for cigars, each.....	.....	.....	.....	.....	2,826,725	28,267.25
Guarantee stamps for leaf tobacco.....each.....	.....	.....	.....	.....	21,332	5,332.15
Coffee guarantee stamps:						
3 cents each.....	.....	.....	.....	.....	.....	.....
5 cents each.....	.....	.....	.....	.....	.....	.....
Total collected.....	.....	2,677,610.52	.....	2,890,986.95	.....	2,144,875.64

TABLE No. 17.—*Comparative statement showing sources of excise taxation in Porto Rico, the quantity of merchandise in the case of specific and the value thereof in the case of ad valorem tax levied, tax paid during the past four fiscal years and the amount of such tax collected, including licenses and miscellaneous—Continued.*

	1918-19		Decrease over fiscal year 1917-18.		Increase compare with fiscal year 1917-18.	
	Quantity or value.	Tax.	Quantity or value.	Tax.	Quantity or value.	Tax.
Distilled spirits:						
Domestic.....liters..	84,579	\$42,289.73	334,226	\$167,133.48		
Imported.....do.....	13,490	6,744.79	17,070	8,535.67		
Contained in medicines, cosmetics, lotions, toilet waters.....liters..	411,887	115,326.86			383,389	\$107,347.80
Near beer:						
Domestic.....do.....	672,942	45,996.66	31,800	4,778.87		
Imported.....do.....	118,338	11,833.89	227,358	22,735.75		
Still wines.....do.....	5,669	566.95	176,342	17,634.13		
Sparkling wines.....do.....	129	64.40	2,014	1,006.80		
Champagne.....do.....			4,226	4,225.47		
Cigars.....each.....	94,622,080	304,418.12	13,804,005	16,907.85		
Cigarettes (domestic and imported).....each.....	458,776,645	917,553.29			96,226,455	192,452.91
Perfumery.....value.....	\$328,051	32,805.09			\$156,065	15,666.54
Patent medicines (domestic and imported).....value.....	\$990,558	99,055.76			\$331,224	33,122.50
Cosmetics, lotions, toilet waters, etc. (domestic and imported), value.....	\$249,501	24,950.11			\$130,546	13,054.65
Arms and ammunitions.....value.....	\$11,004	4,401.76	\$12,918	5,167.11		
Playing cards.....packs.....	39,913	9,978.25	10,733	2,083.25		
Matches.....gross boxes.....	222,532	44,506.30	59,185	11,837.09		
Prepared smoking and fine cut chewing tobacco.....ounces.....	124,306	3,729.18	38,152	1,144.56		
Internal revenue licenses.....		174,817.25		17,150.00		
Opium licenses.....		623.72		34.90		
Physicians' licenses (alcohol).....		129.00		74.00		
Miscellaneous receipts.....		371,433.42				49,833.56
Motor vehicles and accessories (imported).....value.....	\$1,888,928	94,446.40			\$1,331,836.40	66,091.82
Phonographs and accessories (imported).....value.....	\$29,339	1,466.97			\$21,821.40	1,091.09
Pianos, pianolas, and accessories (imported).....value.....	\$31,925	1,596.25			\$17,926.60	896.33
Moving-picture films (imported).....value.....	\$80,156	4,007.80			\$59,166.20	2,958.31
Gems and precious stones (imported).....value.....	\$9,814	981.41			\$9,809.40	980.94
Photographic cameras and accessories (imported).....value.....	\$26.20	2.62			\$26.20	2.62
Billiard tables and accessories (imported).....value.....	\$308.13	46.22			\$308.13	46.22
Guarantee stamps for cigars, each.....	8,822,056	38,220.56			995,331	9,953.31
Guarantee stamps for leaf tobacco.....each.....	132,542	33,135.50			111,210	27,803.35
Coffee guarantee stamps:						
3 cents each.....	5,974	179.22			5,974	179.22
5 cents each.....	130,015	6,500.75			130,015	6,500.75
Total collected.....		2,391,808.23		281,048.93		527,981.52

TABLE No. 18.—Average number of licenses issued during the past six fiscal years, with revenue received therefrom.

Years.	Manufacturers.		Wholesale dealers.		Retail dealers.	
	Num- ber. ¹	Amount collected.	Num- ber. ¹	Amount collected.	Num- ber. ¹	Amount collected.
1913-14.....	743	\$31,073.00	776	\$46,828.50	16,013	\$196,539.00
1914-15.....	756	29,127.50	715	43,145.00	14,929	188,171.75
1915-16.....	692	22,565.00	655	39,617.50	13,902	172,098.00
1916-17.....	704	22,247.25	742	40,307.00	15,315	160,686.75
1917-18.....	591	19,873.75	1,057	41,832.00	11,648	125,431.50
1918-19.....	740	41,699.50	725	33,422.25	8,926	94,785.50

Years.	Billiard tables.		Opium licenses.		Physicians' li- censes.		Total.	
	Num- ber. ¹	Amount collected.	Num- ber. ¹	Amount collected.	Num- ber. ¹	Amount collected.	Licenses in force.	Tax re- ceived.
1913-14.....	577	\$5,767.50	613	\$250.36	.....	.....	17,532	\$273,440.50
1914-15.....	505	5,052.50	761	697.02	.....	.....	17,590	266,462.11
1915-16.....	704	4,895.00	691	684.77	.....	.....	16,515	240,060.02
1916-17.....	483	4,830.00	163	658.62	203	\$208.00	17,941	228,820.77
1917-18.....	492	4,920.00	185	623.72	32	129.00	14,145	192,828.87
1918-19.....	.....	.....	.....	.....	.....	.....	11,100	175,569.97

¹ This number represents the average number of licenses in force each quarter throughout each year. The number issued annually is therefore in each instance four times as great as that given.

TABLE No. 19.—Taxable articles exported from Porto Rico during the past five fiscal years free of tax.

Articles.	1914-15	1915-16	1916-17	1917-18	1918-19	Increase 1918-19 over 1917-18.	Decrease 1918-19 compared with 1917-18.
Alcohol.....liters..	234,004	676,979	859,436	927,860	484,859	.....	443,010
Bay rum.....do.....	272,325	290,501	398,132	175,293	293,194	117,901	.....
Alcohol in bay rum, liters.....	152,142	166,560	215,476	95,971	161,543	65,572	.....
Beer.....liters.....	13,970	110,199	180,290	121,373	133,500	12,127	.....
Cigars.....number..	174,275,407	159,248,855	210,399,365	181,779,520	149,124,690	.....	32,654,830
Cigarettes.....do.....	12,020,750	11,765,430	9,571,250	6,439,600	18,886,200	12,446,600	.....
Medicines.....	.....	.....	\$4,905.48	\$5,633.99	\$12,134.72	\$6,500.73	.....

TABLE No. 20.—Comparative statement of excise tax cases submitted by the internal-revenue agents during the fiscal years 1917-18 and 1918-19.

	1917-18	1918-19
Administrative cases with fines imposed collected.....	1,336	1,636
Administrative cases with fines imposed suspended.....	9	19
Excise tax cases suspended without fines having been imposed.....	130	125
Prosecution cases transmitted through the office of the attorney general, guilty.....	57	82
Prosecution cases transmitted through the office of the attorney general, not guilty.....	14	39
Prosecution cases suspended.....	.....	5
Prosecution cases dismissed by court.....	4	.....
Total number of cases.....	1,550	1,906

TABLE NO. 21.—Comparative statement of leaf tobacco imported and grown in Porto Rico and of exportation of leaf tobacco and elaboration of cigars for exportation and consumption in Porto Rico during the fiscal years 1917-18 and 1918-19.

	1917-18	1918-19	Increase 1918-19 over 1917-18.	Decrease 1918-19 over 1917-18.
Leaf tobacco:				
Acres planted and cultivated.....acres	51,445	39,486		11,959
Total crop during the year.....pounds	25,772,500	23,691,825		2,080,675
Leaf tobacco imported into Porto Rico.....do	2,262,044	1,675,637		586,407
Porto Rican leaf tobacco exported.....do	20,102,491	17,585,796		2,516,695
Porto Rican leaf tobacco used in the manufacture of cigars.....pounds	4,307,620	4,183,914		123,706
Imported leaf tobacco used in the manufacture of cigars.....pounds	871,771	1,430,942	559,171	
Total amount of leaf tobacco elaborated.....do	5,879,391	5,614,856		264,535
Cigars exported:				
Elaborated from Porto Rican leaf tobacco.....cigars	114,386,732	84,709,883		29,676,849
Elaborated from a mixture of Porto Rican and imported leaf tobacco.....cigars	67,287,767	64,414,807		2,872,960
Elaborated from imported leaf tobacco.....do	105,000			105,000
Total amount of cigars elaborated for exportation.....cigars	181,779,519	149,124,690		32,654,829
Cigars consumed in Porto Rico:				
Elaborated from Porto Rican leaf tobacco.....do	37,602,994	29,364,681		8,238,313
Elaborated from a mixture of Porto Rican and imported leaf tobacco.....cigars	64,815,452	64,148,185		667,267
Elaborated from imported leaf tobacco.....do	4,228,239	821,936		3,406,293
Total amount of cigars elaborated for consumption in Porto Rico.....cigars	106,646,685	94,334,802		12,311,883
Total amount of cigars elaborated during the year.....cigars	288,426,204	243,459,497		44,966,707

TABLE NO. 22.—Comparative statement of tobacco guaranty stamps used during the fiscal years 1917-18 and 1918-19.

	1917-18		1918-19		Increase 1918-19 over 1917-18.		Decrease 1918-19 over 1917-18.	
	Stamps.	Value.	Stamps.	Value.	Stamps.	Value.	Stamps.	Value.
On cigars exported from Porto Rico.....	1,246,854	\$11,713.87	289,865	\$2,898.65			956,989	\$8,815.22
On cigars consumed in Porto Rico.....	1,890,201	18,902.01	3,542,834	35,428.34	1,652,633	\$16,526.33		
On leaf tobacco exported from Porto Rico.....	24,425	6,106.25	129,769	32,442.25	105,344	26,336.00		

APPENDIX VI.

REPORT OF THE COMMISSIONER OF THE INTERIOR.

OFFICE OF THE COMMISSIONER OF THE INTERIOR,
San Juan, P. R., September 8, 1919.

SIR: Complying with the provisions of article 13 of the act of Congress of the United States, entitled "An act to provide a civil government for Porto Rico, and for other purposes," approved March 2, 1917, I have the honor to submit for your consideration the annual report for the fiscal year ending June 30, 1919, concerning the work accomplished by and all matters pertaining to the department of the interior.

The organization of this department for the past year was the same as that of the previous fiscal year. Except for minor changes made from time to time to meet conditions and requirements, this is the same organization which for a number of years has been discharging the duties of the department in accordance with the best practice and pursuant to the provisions of our Political Code, and of our laws in general. This organization comprises the bureau of public works, bureau of insular telegraph, the divisions of public buildings, municipal works, public lands and archives, disbursements and accounts, and the Porto Rico irrigation service. Each one of these bureaus and divisions works under the direction of a chief with its special personnel in each office, these bureaus and divisions discharging their special duties and cooperating among themselves under the direction of the commissioner of the interior.

Before discussing the work done by each one of these divisions during the fiscal year 1918-19, which marks the close of the 20-year period under the American Government established in Porto Rico in 1898, a brief historical review will be made of the development attained by the activities of this department back from the days of the Spanish régime and embracing the last 20 years, and an attempt will be made to compare the progress made in both periods. What this progress has been, and especially how remarkable the one made during the last 20 years, can be seen at once in the statement attached entitled: "Statement showing the progress made in the construction of public works in the island."

TABLE No. 1.—Statement showing the progress made in the construction of public works in the Island.

Class of work.	Under Spanish régime.			Under American régime.					
	Total up to the year 1878.	Progress each 10 years.		Total up to time of American occupation.	Progress each 10 years.		Total progress to 1918.	Progress made from 1898 to 1918.	
		1878-1888.	1888-1898.		1898-1908.	1908-1918.			
Roads constructed.....kilos..	86	118	63	267	622	300	1,189	922	
Bridges from—									
100 to 40 m. long.....				8	5	25	38	30	
40 to 20 m. long.....				13	2	18	33	20	
20 to 5 m. long.....				38	18	36	92	54	
Municipal roads.....kilos..				2,938	2,412	1,531	6,881	3,943	
Public service railroads and street railways. do..	2	18	210	220	243	84	557	327	
Private narrow gauge railroads.....do..				67	145	408	620	553	
Private telegraph lines.....do..				99	99	88	187	88	
Private telephone lines.....do..				12	12	204	490	684	
Insular telegraph and telephone lines, offices.....do..	22		19	41		10	51	10	
Total length of lines.....kilos..				1,240		911	2,151	911	
Insular public buildings.....				20	4	22	46	26	
Municipal public buildings.....	67	16	18	1014	47	125	273	172	
Public school buildings.....					375	122	497	497	

TABLE NO. 1.—*Statement showing the progress made in the construction of public works in the Island—Continued.*

Class of work.	Under Spanish régime.			Under American régime.			
	Total up to the year 1878.	Progress each 10 years.		Total up to time of American occupation.	Progress each 10 years.		Total progress to 1918.
		1878-1888.	1888-1898.		1898-1908.	1908-1918.	
Insular public buildings:							
Costing over \$100,000.....				6	1	1	8
Costing over \$80,000.....							2
Costing over \$60,000.....				4			4
Costing over \$70,000.....				1			1
Costing over \$80,000.....							
Costing over \$50,000.....						1	1
Costing over \$40,000.....				1			1
Costing over \$30,000.....				1		1	1
Costing over \$20,000.....				2	2	3	7
Costing over \$10,000.....				2	1	2	5
Costing less than \$10,000.....				4		14	18
Municipal public buildings:							
Costing over \$100,000.....					1		1
Costing over \$80,000.....				1			1
Costing over \$60,000.....				2			2
Costing over \$40,000.....				2		2	4
Costing over \$20,000.....				8	2	5	15
Costing less than \$20,000.....				88	44	118	250
Public school buildings:							
Costing over \$100,000.....						2	2
Costing over \$80,000.....						1	1
Costing over \$60,000.....							
Costing over \$70,000.....					1		1
Costing over \$80,000.....							
Costing over \$50,000.....						5	5
Costing over \$40,000.....						2	2
Costing over \$30,000.....					5	6	11
Costing over \$20,000.....					3	5	8
Costing over \$10,000.....					18	20	38
Costing less than \$10,000.....					348	80	428
Municipal water works.....	5		2	7	6	24	37
Municipal sewerage systems.....	1			1	1	5	7
Municipal and private electric light systems.....			4	4	1	50	55
Insular, municipal and private piers and docks under franchises.....							13
Maritime transport companies for freight and passengers in Porto Rico under the regulation of the Public Service Commission.....							16
Corporations subject to franchises operating vehicles for transporting freight and passengers between towns.....							124
Public service automobiles not subject to franchises, used for transporting freight and passengers between towns.....							1,317

PUBLIC WORKS.

REVIEW OF PAST ACTIVITIES.

The organization of public works during the time of the Spanish Government and in the first days of the American Government is well described in the report for the year 1900 made by Gen. George W. Davis to the War Department. An extract of this report follows:

"ORGANIZATION OF PUBLIC WORKS IN PORTO RICO FROM THE YEAR 1875 TO MAY 1, 1900.

"From the year 1875 until shortly before the Spanish-American War there was a dual administration of public works in Porto Rico. 'The Diputación Provincial' ¹ had a bureau known as the 'Obras Públicas Provinciales,' while under the 'Ministro de Ultramar' ² there existed the 'Jefatura de Obras Públicas.'

¹ "Diputación Provincial." The "Diputación Provincial" was an elected body of delegates or deputies which exercised legislative and administrative functions.

² "Ministro de Ultramar." The "Ministro de Ultramar" was the member of the council of ministers of the Crown of Spain who had charge of all matters pertaining to the Spanish colonies.

"The provincial organization had charge of certain road work and of certain public buildings, and acted as technical adviser to the deputation.

"The 'Jefatura' was the more important organization, having certain rights of inspection over the provincial bureau, and being charged with work on certain roads, public buildings, and lighthouses, as well as technical matters concerning franchises, railroads, and the like.

"Harbor works, where carried on at all, were administered by local harbor-works boards, which prior to the war existed at San Juan, Ponce, and Mayaguez, and the 'Jefatura de Obras Públicas' furnished certain technical assistance and supervision to the work of the harbor-works boards.

"The Cánovas' reforms, instituted by law December 31, 1896, went into effect July 1, 1897. By this law the bureau of public works pertaining to the deputation became charged with almost all the work of the old 'Jefatura,' retaining its own peculiar functions as well. The 'Jefatura' was renamed the 'Inspección de Obras Públicas,' losing its administrative character and remaining as a body advisory to the governor general. The short period during which the Cánovas reforms were in effect did not permit affairs to get in running order.

"The Sagasta' reforms provided for autonomy is a law promulgated November 25, 1897. The short time elapsing between the passage of the act and American occupation was insufficient for consummating the changes proposed. However, on February 11, 1898, there was appointed a 'secretary of fomento' who was charged with all duties that pertained to public works. His bureau for such work was named again the 'Jefatura de Obras Públicas.' At the time of American occupation, October 13, 1898, the secretary of fomento was Dr. Salvador Carbonell and the chief engineer was Eduardo Cabello. Under the military government of Gen. Brooke, Dr. Carbonell was retained and Mr. Juan Bautista Rodriguez was appointed chief engineer. The former retained office until February 9, 1899, when relieved by Mr. Federico Degstau. Mr. Rodriguez was relieved by Mr. Francis L. Hills on February 9, 1899, the title of Mr. Hills soon being changed to director of public works.

"In the meantime, on January 18, 1899, the inspection, care, and maintenance of lighthouses had been transferred from the department of the interior to Ensign W. R. Gherardi, United States Navy.

"On February 15, 1899, the harbor-works board of San Juan was abolished, Commander A. S. Snow, United States Navy, being appointed inspector of harbor works, and Maj. E. A. Root, chief engineer, United States Volunteers, being appointed engineer in charge.

"All of the changes above enumerated took place under the military government of Gen. Henry.

"Gen. Henry was relieved by Gen. Davis on May 8, 1899.

"On August 12, by general order, Gen. Davis reorganized the public works, placing harbor works, lighthouse construction and repair, maintenance and construction of roads, bridges, and public buildings, and technical matters relating to franchises, railroads, and the like, under a board of public works, composed of the undersigned as president, with Messrs. F. L. Hills and J. B. Rodriguez as the other members. This board continued to administer public works until April 30, 1900, with the following changes of personnel, to wit:

"Mr. Hills resigned October 31, 1899, and Mr. P. F. Fernandez was appointed a member March 1, 1900.

"The many changes above enumerated occurring within the short space of three years have necessarily affected the conduct and progress of work adversely. Speaking for the time of which I have personal knowledge, however, I may say there was an earnest and harmonious effort made by the board of public works to secure an honest and efficient administration. Whenever possible Porto Ricans were retained or employed in all capacities, and I wish to remark that among the Porto Ricans are many able, industrious, and high-minded men.

"The board organized its work into five sections—those of roads, public buildings, lighthouses, harbors, and accounts. The principal section—that of roads—was further subdivided into surveys and field data, design of bridges, etc., construction and maintenance. Each of these subdivisions was placed under a well-equipped engineer.

"The engineer in charge of construction also administered the sections of harbors and lighthouses, while the old Spanish contracts for construction were cared for by the engineers in charge of surveys and maintenance, the last two being Porto Ricans.

"An architect was placed in charge of the section of public buildings.

¹ "Cánovas:" Cánovas del Castillo, was at that time president of the council of ministers of the Spanish Crown, leader of the conservative party, and one of the most prominent men of Spain of the period.

² "Sagasta:" Sagasta succeeded Cánovas in the presidency of the council of ministers. He was also a very prominent man of Spain and the leader of the liberal party.

"Upon each work of construction there was employed a resident engineer, with the necessary instrument men, rodmen, inspectors, etc., the resident engineer reporting to the engineer in charge of surveys and construction.

"Under the engineer in charge of surveys five well-equipped parties have taken the field, one party making borings for bridge foundations and four making surveys for future construction.

"The organization under the engineer in charge of maintenance comprised 3 assistants, 9 sobrestantes (overseers), 16 capataces (foremen), and 95 camineros (road workers). This is the European system, which reaches its highest development in France, where the roads maintained exceed 400,000 miles in aggregate length and where an immense army of regular employees is constantly occupied with maintenance.

"Each caminero is specially charged with the care of from $1\frac{1}{2}$ to $2\frac{1}{2}$ miles of road. Camineros are brigaded or special workmen are employed where large quantities of stone are being placed in a given locality. The caminero system is only employed in connection with the completed portions of permanent roads. When these roads were built under Spain, caminero houses were provided at proper intervals along the road, and the occupancy of his house, as well as the dignity of his position among his peon neighbors, are large additions to the \$15 received monthly by the caminero. It is believed that no other system will suit conditions in Porto Rico as well as the one I have described. The road worker is essentially a skilled laborer; consequently his employment must be continuous, so that he may be trained, and when trained retained. I believe it requires several years in the average case to develop good camineros. The constant changes of personnel throughout the organization have not yet permitted the development of a first-class force, but there is no reason why it should not soon exist. It has seemed to me that the camineros might be supplemented by one or more gangs, thoroughly equipped with modern road machinery, who should undertake those extensive repairs that amount to reconstruction.

"This organization for road work was found entirely competent to handle not only the works undertaken, as hereafter described, with insular funds, but also, with the addition of a second engineer in 'construction,' the road work undertaken by me as engineer officer of the department, with allotments from Federal appropriations aggregating on April 30, 1900, \$860,000."

Having quoted part of the report of Gen. G. W. Davis to the War Department, which covers the operations of the military government until May, 1900, and contains historical and statistical data of what was done during the Spanish Government, we will proceed to give an account on the development of our roads and bridges.

CONSTRUCTION OF ROADS AND BRIDGES DURING THE PERIODS OF 1871-1899 AND 1899-1919.

Sufficient data available about the construction of roads and bridges in the island date only as far back as the year 1871. The annual reports of the "Jefatura de Obras Públicas" show that up to the year 1871 only 48 kilometers of road had been built in the island.

The first bridge, joining the small island where the city of San Juan is founded with the main island, across the San Antonio Channel, was carried out and completed in the year 1521, and another masonry bridge was built over Cano Martin Pena toward the year 1773. The road between San Juan and Rio Piedras was also built about that time. In the year 1797 the bridge over Martin Pena Channel was destroyed by an invading English army, and it was reconstructed in the year 1846.

The bridge known as "Los Frailes," located at kilometer 19 of Road No. 1, between Rio Piedras and Caguas, was built in the year 1854. This handsome bridge consists of eight masonry arches and has a total length of 122 meters.

The progress made during the years 1871 and 1888 is shown in the tables given below, which have been taken from the report of the "Jefatura de Obras Públicas," corresponding to the years 1885-1888.

TABLE NO. 2.—*Appropriations made in the general budget of this island from the fiscal year 1871-72 to the year 1887-88, to carry out the work in charge of the "Jefatura de Obras Públicas," amounts expended during each of these years, and the number of kilometers of road built during that time.*

Fiscal year.	Total appropriations.	Amounts expended.	Length of existing roads.
	<i>Pesos. Cts.</i>	<i>Pesos. Cts.</i>	<i>Kilometers.</i>
1871-72.....	103,421.65	25,516.44	48
1872-73.....	106,321.10	23,085.42	48
1873-74.....	297,068.59	56,593.09	48
1874-75.....	409,794.38	173,754.01	48
1875-76.....	398,394.53	197,534.84	65
1876-77.....	398,264.53	201,385.09	86
1877-78.....	406,289.31	223,150.19	86
1878-79.....	350,970.25	199,316.25	89
1879-80.....	316,727.12	233,270.37	105
1880-81.....	409,011.31	256,376.50	141
1881-82.....	272,015.54	236,376.50	144
1882-83.....	335,471.18	267,875.66	144
1883-84.....	334,156.00	317,232.72	144
1884-85.....	290,306.00	252,273.70	164
1885-86.....	330,138.00	246,523.17	164
1886-87.....	336,788.00	195,416.80	170
1887-88.....	336,653.00	321,655.86	176
Total.....	5,432,300.79	3,427,820.09	176

The provincial roads, thus named because they were built by the "Deputación Provincial," are not included in the above statement. The intervention of the "Jefatura de Obras Públicas" with regard to the provincial roads was only limited to their inspection.

TABLE NO. 3.—*Distribution of expenditures made during the fiscal years 1871-1888.*

	1871-1887	1887-88	Total.
Personnel:			
Salaries.....	\$406,331.10	\$39,675.68	\$446,006.78
Traveling expenses and per diems.....	72,243.92	4,015.75	76,259.67
Miscellaneous expenses.....	15,548.18	1,109.59	15,657.77
Roads:			
Surveys and new construction.....	1,385,111.50	135,211.99	1,520,323.49
Maintenance and repairs of roads.....	655,009.31	71,485.01	726,494.32
Surveys and new construction of railroads.....	207.70		207.70
Harbor works:			
Surveys and new construction.....	51,161.85	25,000.00	176,161.85
Salaries of personnel.....	9,320.01		9,320.01
Maintenance and repairs of harbor works.....	77,571.28	1,000.00	78,571.28
Lighthouses:			
Preservation of the material on hand and maintenance of the Morro lookout tower.....	1,716.29		1,716.29
Salaries of personnel in charge of lighthouses.....	35,559.80	6,602.50	42,162.39
Surveys and new works.....	139,597.12	15,853.09	155,450.21
Maintenance and lighting expenses.....	16,870.97	2,694.43	19,465.40
House rent for lighthouse keeper.....	3,878.15	340.11	4,218.26
Bonus to gate keepers.....	4,603.44	1,249.20	5,852.64
Maintenance of buoys and beacons.....	28,294.40	650.00	28,944.40
New construction, maintenance and repairs of public buildings.....	104,139.72	16,768.51	120,908.23
Total.....	3,106,164.83	321,655.86	3,427,820.69

¹ In the year 1871 there were only 48 kilometers of roads; in the year 1888 there were only 176 kilometers of roads.

The 176 kilometers of roads built up to the year 1888 were distributed in the following sections:

	Kilometers.
Road No. 1, from San Juan to Ponce.....	133
Road No. 2, from Cataño to the bridge known as Reyes Católicos.....	20
Road No. 2, from the Yaguez to the Anasco River.....	9
Road No. 3, from Mayaguez to Ponce, portion between Mayaguez and Puente Pezuela.....	14
Total of roads belonging to the "Estado" and built by the Spanish Government and the "Jefatura de Obras Públicas".....	176

In addition to the above roads, there were in the year 1888 the following provincial roads:

	Kilometers.
Road No. 6, from Arecibo to Ponce.....	9
Road No. 7, from Río Piedras to Fajardo.....	19
Total of provincial roads, built by "Obras Públicas Provinciales," but subject to the inspection of the "Jefatura de Obras Públicas".....	28

Résumé for the year 1888.

	Kilometers.
Total of roads of the "Estado".....	176
Total provincial roads.....	28
Total of roads in the island.....	204

BRIEF HISTORICAL ACCOUNT ABOUT THE FIRST INSULAR ROADS.

Road No. 1, from San Juan to Ponce, known as "Carretera Central," and also as "Carretera Militar," was completed in the year 1886, with the exception of 1 kilometer, running through the city of Ponce. The section of 36 kilometers between San Juan and Caguas was finished in the year 1871; the 24 kilometers between Caguas and Cayey, the 17 kilometers between Aibonito and Coamo, and the 20 kilometers between Coamo and Juana Díaz were completed in the year 1881. In the years 1875 and 1880, respectively, the Estado took charge of the provincial road joining the municipalities of Juana Díaz and Ponce and that joining the city of Ponce with its Playa. The last portion of this road, that between Cayey and Aibonito, with a length of 20 kilometers, was finished in the year 1886.

The estimate for building the section from Caguas to Aibonito, 44 kilometers in length, amounted to \$544,654.78, which gives an average cost of \$12,378.52 per kilometer.

Road No. 2, from Cataño to Mayaguez, was started in the year 1881, when 7 kilometers between Cataño and Bayamon and 9 kilometers between Mayaguez and Río Anasco were built. The bridge over Río La Plata, known as bridge of "Los Reyes Católicos," on this road, was built in the same year. This bridge was formed by three steel spans each 33 meters long. This bridge was washed away and destroyed by floods during the hurricane of San Ciriaco, on August 8, 1899.

A call for bids for the construction of 13 kilometers of road between Bayamon and the "Los Reyes Católicos" bridge, was made in the year 1883, and the contract was subsequently awarded in the amount of \$79,760. The construction of this portion of road was finished in the year 1886. The average cost per kilometer of this road amounted to \$6,135.

The State (Estado) did not take charge of any portion of the road from Mayaguez to Ponce until the year 1880, when it undertook to maintain the first 14 kilometers lying between Mayaguez and the bridge known as "Pezuela." The remaining 83 kilometers down to Ponce, and which consisted of stretches of dirt roads, were opened to public service, but in the care of the various municipalities.

Road No. 4, between Cayey and Arroyo.—The survey of this road was finished in the year 1886, and the estimate of cost of construction amounted to \$813,889.71. A call for bids was made, but no proposal was received, and it was then decided, in the year 1887, to carry out the work by administration. Our records do not show exact data as to the cost of this road, but it is known that the amount of the above estimate was all expended in the first 26 kilometers between Cayey and Guayama, which stretch was finished just before the time of the American occupation, in the year 1898. There is no doubt that the average cost of this road per kilometer exceeded the sum of \$31,302.

It would be interesting to give some statistical data relative to the period between the years 1888-1898, as has been done for the years 1871-1888, but we have not been able to find any records for this period in the archives of this department. It is known that during this period 63 kilometers of road were built, at an approximate cost of \$1,062,000. With reference to this incompleteness of our records, it is worth while to repeat here the statement of the commissioner of the interior made in his annual report for the year 1906, which explains:

"* * * that about the time of the American occupation of Porto Rico a large number of boxes containing these documents were sent by the civil secretary to Washington. They were subsequently returned to Porto Rico by way of Cuba. At Cuba some 89 boxes were sent ashore by mistake and have never been returned to this department. As some of these documents are of great value and interest to the people of the island and many are absolutely necessary for the settlement of Crown lands, I would respectfully suggest that the Federal Government take some steps to have them returned to this department."

There are indications which would make us believe that these documents found their way to Manila, where Brig. Gen. George W. Davis worked on a long and interesting report of Porto Rico, already mentioned herein, and which extends from the day of the occupation by the American Army up to May 1, 1900. On this date the government of the island was turned over to the civil authorities, taking office by virtue of the Foraker Act.

The statistical data about the subject of roads are not given in this report of Gen. Davis, but it is stated there that the total expended by the Spanish Government in the construction of roads in this island amounted to \$3,484,627, which is equivalent to an average cost per kilometer of \$13,740. These same data are also found in the reports of this department corresponding to the years 1900 and 1901, where they appear in detail, as follows:

TABLE No. 4.

Roads.	Length.	Approximate cost.	Average cost.
	<i>Kms.</i>	<i>Pesos.</i>	<i>Pesos.</i>
San Juan to Ponce Playa.....	134	1,879,340	14,026
Cataño to Toa Alta.....	22	239,767	10,888
Añasco to Pezuela Bridge through Mayaguez.....	22.2	202,080	9,102
Ponce toward Adjuntas.....	15	152,320	10,154
Rio Piedras to Rio Grande.....	25.6	265,200	10,359
Utuaño toward Arecibo.....	4	99,000	22,500
San Sebastian toward Moca.....	4.3	31,320	7,285
Cayey to Guayama.....	26.5	615,600	23,207
Total.....	253.6	3,484,627	13,740

In the annual reports of this department up to and including the report for the past fiscal year 1918 the figures above given do not appear but instead it is stated that the roads built and completed by the Spanish Government aggregated a total length of 275 kilometers, and their cost is given as \$2,560,927.07. It appears, however, that the first figures and not the latter are nearer the correct ones, since if we take the amount expended in surveys and new constructions of roads during the years 1871-1888, which according to Table No. 3, previously given in this report, was \$1,520,323.49, and divide it by the 148 kilometers of roads built during these years, as shown in Table No. 2, an average cost per kilometer is obtained equal to \$11,877. If from the 253.6 kilometers built up to the year 1898 are deducted the 26 kilometers of road from Cayey to Guayama, which cost approximately \$813,889, there remains 227.6 kilometers, which at the average cost of \$11,877 per kilometer, would amount to \$1,703,205. Adding this latter amount to the cost of the Cayey-Guayama Road—\$813,889—a total of \$3,517,094 is obtained, which is very near to that given in the report of Gen. Davis, as well as in the first reports of this department.

Accepting as correct the figures given in Table No. 4—that is, that the cost of the 253.6 kilometers of roads built by the Spanish Government amounted to \$3,484,627—there is obtained an average cost per kilometer of \$13,740. During the 20 years of 1898-1919, under the American Government, 922 kilometers have been built at a total expense of \$5,970,956. This is equivalent to an average cost per kilometer of \$6,476, which is only about 50 per cent of the cost of roads per kilometer built during the Spanish Government.

If we compare the progress made in road construction, we find that during the last 20 years of the Spanish régime 181 kilometers were built, which means approximately 9 kilometers per year, while in the 20 years which have elapsed under the American Government from the year 1898 to the year 1919, there were built 922 kilometers, or an average of 46 kilometers per year; that is to say, that for every one of the last 20 years a progress has been achieved equivalent to that accomplished for every five years during the time of the Spanish Government.

It is but fair to call attention to the fact that among the works carried out by the Spanish Government were found the Military Road No. 1, from San Juan to Ponce, which road, especially the portion between Caguas and Coamo, as well as Road No. 4, from Cayey to Guayama, stand out as two splendid works of engineering, which surely give credit to the engineers in charge of their survey and construction. This general average cost per kilometer of \$13,740 is not excessive, if it is taken into account that the total length of the roads built under the Spanish Government were fully provided with all necessary structures of permanent construction, and that this average cost also included the cost of road houses which were provided at intervals of 3 kilometers, for lodging section men or road menders, who afterwards were to take care of the maintenance. Some of these houses cost as high as \$7,000. As to the

average cost per kilometer of \$6.476 of the roads built during the 20 years under the American Government, it must be noted that a good part of the 922 kilometers built during this period was completed in the first few years after the American occupation in 1898, and that the roads then built were along the coast, where the topography of the country makes the construction of roads relatively easy and inexpensive, such as the road between Fajardo and Humacao. Aguadilla to Quebradillas, and from Arroyo to Guayama, and account should be taken that during these first few years of the American Government, the principal aim was to extend as quickly as possible the means of communication, without giving primary importance to the requirements for building first-class permanent roads.

Under this policy temporary arrangements were made to facilitate traffic, and thus a considerably large number of road structures were built of wood, instead of masonry, and no bridges were provided over river crossings wherever the latter could be forded. The construction of roads of this period was therefore notable for the speed in which it was carried out, but the system of roads, although justified by the needs of the time, was incomplete. Experience has shown that this system of construction is not a good one, since works not entirely completed are opened to traffic, with the result that in a few years they go to pieces, since the small appropriations which are yearly assigned for the maintenance of roads are entirely inadequate to properly maintain them. This system inevitably ends with a need of reconstructing the roads, necessarily at a much larger expense to the Government. The roads built within the last few years, however, have been provided with permanent structures, better macadam, and are quite up to the standard established by the roads which were built during the Spanish Government. This fact, and the high prices of materials in general, wages and transportation cost, which has been constantly rising for the last 5 years, account for the high average cost per kilometer of the roads which have been lately constructed or are under construction at present. This average cost now amounts to \$13,000.

The roads built and under construction up to the time of the American occupation in 1898, were the following:

TABLE No. 5.

No.	Roads.	Length constructed.		Length under construction.	
		Kilometers.	Section.	Kilometers.	Section.
1	San Juan-Ponce.....	134	San Juan-Ponce.		
2	Catano-Mayaguez.....	29	Catano-Reyes Catolicos, 20 kilometers; Rio Anasco-Mayaguez 9 kilometers.	4	Reyes Catolicos-Vega Alta.
3	Mayaguez-Ponce.....	14	Mayaguez-San German.	7	Guayama-Arroyo.
4	Cayey-Arroyo.....	26	Cayey-Guayama.....	14.5	Caguas-San Lorenzo, 2.5 kilometers; San Lorenzo-Las Piedras, 12 kilometers.
5	Caguas-Humacao.....				
6	Arecibo-Ponce.....	19	Ponce-Adjuntas, 15 kilometers; Utuado-Arecibo.	9	Ponce-Adjuntas, 2.3 kilometers; Utuado-Arecibo, 6.7 kilometers.
7	Rio Piedras-Fajardo.....	25	Rio Piedras-Rio Grande.....	6.7	Rio Grande-Luquillo.
8	Aguadilla-Lares.....	4	Moca-San Sebastian.....	3.5	Moca San Sebastian.
9	Bayamon-Carretera No. 1, between Cayey and Albonito.			4.6	Bayamon-Comerio.
10	Bayamon-Barros.....	3	Reyes Catolicos-Toa Alta.	3.2	Toa Alta-Corozal.
11	Manati-Juana Diaz.....			4.6	Manati-Ciales.
Total.....		254		57.1	

It is thus shown by the above table that when the control of the Spanish Government ceased, 254 kilometers had been completed and 57 kilometers were under construction. Of these 57 kilometers, 6.7 kilometers of the Rio Grande-Luquillo section, 3.2 kilometers of the Toa Alta-Corozal section, and 3.5 kilometers of the Moca-San Sebastian section, in all 13.4 kilometers, were almost completed in 1898. Adding this length to the 254 kilometers entirely finished, we obtain a total of 267.4 kilometers, and this is the length which can be considered as the true length of road built during the Spanish régime. This figure agrees with the information given in the report of this department for the year 1904. The difference between this length of kilometers and the statement made in subsequent reports of this department, where the length completed is given as 275 kilometers, can not be accounted for.

Besides the roads already mentioned, there were at the time of the American occupation, in 1898, a great number of the so-called municipal roads, which were under the care of the various municipalities. Although these roads were not macadamized, they afforded, nevertheless, a means of communication which served to carry on the commerce between the towns of the interior of the island, as well as between these towns and the larger ones along the coast. Some of these roads were, for instance, the one between Humacao and Fajardo going through Naguabo, which was 25 kilometers long, and the one from Puente Pezuela near Mayaguez, toward Ponce, which was 83 kilometers long, and a good number of others, which, in the last 20 years, have been transformed into first-class macadamized insular roads.

During the Spanish régime there were also built several important bridges. The first bridges were built of ordinary and ashlar masonry combined. The bridge over the Martín Peña Channel, which is 70 meters long, and the bridge known as Los Frailes, 122 meters long, on Road No. 1, which bridges are still in use, are good examples. Later, several steel bridges were built using trusses imported from Belgium and France, the most important of which were the bridge over Caño San Antonio on Road No. 1, the bridge over La Plata River near Cayey, 62 meters long; the bridge over Rio Coamo, the bridge over Rio Descalabrado, the bridge known as "Las Damas" over Rio Caguitas near Caguas, and the one over Rio Portugues on the road from Ponce to La Playa. The last two bridges were washed away by heavy floods. Other bridges of this kind were also the bridge over Rio Cibuco of 20 meters spans, the one over Rio Guajataca, the bridge over Rio Culebrinas near Aguadilla, the one over Rio Yaguez near Mayaguez, and the bridge known as "Los Reyes Católicos", (this bridge consisted of a continuous girder of three spans, each 33 meters long, which was destroyed by the cyclone of San Ciriaco, August 8, 1899). The bridge over Rio Canovanillas and the one over Rio Canóvanas, each 30 meters spans on Road No. 3; the viaducts known as Caguanitas and Otero on Road No. 6, and the bridge over Rio Grande de Arecibo, near Utuado, which was destroyed by the cyclone of 1899.

To close this historical review of the development of roads and bridges in this island a table is given below, which shows the number of kilometers built up to the year 1918, the approximate total cost, and the average cost per kilometer of these roads.

TABLE NO. 6.—Statement showing number of kilometers of roads built up to the year 1918, approximate total cost, and the average cost per kilometer.

Year.	Kilometers of roads built.			Approximate cost.	Average cost per kilometer
	State roads.	Provincial roads.	Totals.		
Spanish Government, previous to 1871.....	48	.....	48	.....	.....
1874-1878.....	38	11	49	.....	.....
1879-1883.....	58	5	63	.....	.....
1884-1888.....	32	12	44	\$3,484,827	\$13,720
1889-1893.....	27	28	50	.....	.....
1894-1898.....					
American Government, insular roads:					
1898-1899.....	.....	13	13	.....	.....
1899-1903.....	297	.....	297	1,775,486	5,727
1904-1908.....	325	.....	325	1,515,637	4,668
1909-1913.....	188	.....	188	1,379,594	7,338
1914-1918.....	112	.....	112	1,300,239	11,610
Totals.....	1,125	64	1,189	9,455,573	7,952

BUREAU OF PUBLIC WORKS, FISCAL YEAR 1918-1919.

As provided by law, this bureau is under the direction of a superintendent having charge of the work of surveying, construction, and maintenance of public roads and bridges, harbors and docks, and the supervision of the construction and maintenance of all municipal roads. The work as organized is carried out by means of four offices, as follows:—

(a) Surveying; (b) construction; (c) designing and estimates, and (d) maintenance and repairs of roads and bridges, each office being in charge of an engineer, who, under the general supervision of the superintendent, performs all the obligations imposed upon him by law, and in addition, carries out the work that the commissioner of the interior assigns to him from time to time such as reports concerning railroad franchisees, docks, etc., whenever these are requested by the public service commission.

The work accomplished by the bureau of public works during the year deserves great credit on account of the large amount of work executed, not only in what has reference to the maintenance of roads and bridges but also along the lines of new construction which is paid from the \$2,000,000 road bond fund, as is shown in another section of this report.

The following table shows a general statement of appropriations and expenditures.

General statement of appropriations and expenditures.

	Appropriation.	Repayments.	Transferred appropriation.	Total credits.	Expended prior to fiscal year 1918-19.	Expended during fiscal year 1918-19.	Balance at end of fiscal year 1918-19.
Maintenance, repair, and construction of insular roads and bridges:							
1918-19	\$650,000.00	\$9,717.47	.....	\$659,717.47	.....	\$647,575.07	\$12,142.40
1917-18	625,000.00	.....	.....	625,000.00	\$608,886.41	13,894.91	2,218.68
Bridge and road construction acts of 1912, 1914, 1915, 1916, 1917	320,000.00	8,630.38	\$250.00	328,880.38	133,253.53	88,562.09	107,063.56
Earthquake relief fund:							
Repair of Caminero houses ..	6,000.00	.....	.....	6,000.00	.....	773.21	5,226.79
Repairing bridges and culverts ..	25,000.00	.....	.....	25,000.00	.....	416.11	24,583.89
Road bond fund 1916 (\$2,000,000) ..	1,006,610.33	.....	.....	1,006,610.33	332,649.06	369,257.02	304,704.26
Total	2,632,610.33	18,347.85	250.00	2,651,208.18	1,074,788.94	1,120,478.41	455,989.58

CONSTRUCTION OF ROADS AND BRIDGES, FISCAL YEAR 1918-19.

On account of the abnormal conditions prevailing during the year brought about by the great World's War, the severe seismic disturbances which took place in October, 1918, and lastly by the epidemic of Spanish influenza, the different works of construction which were being carried on throughout the island were greatly hindered, so that work on many of them was almost stopped, and consequently it has not been possible to complete these at the dates stipulated in the different contracts.

In spite of all these difficulties, the fiscal year just ended has been one of great activity as far as the construction of roads and bridges is concerned, there having been completed during the year a total of 41.3 kilometers of roads and 15 bridges with an aggregate length of 448 linear meters. The greater part of this work has been paid from the \$2,000,000 road bond fund, created by law No. 71, approved on April 13, 1916, and the remainder from the appropriation for the construction, maintenance, and repairs of public roads and bridges corresponding to the fiscal year 1918-19.

The total amount of work contracted for during the year is as follows:

Date of contract.	Nature of work.	Amount of contract.
July 2, 1918	Repair of bridge over Guajataca River and construction of Anon Bridge, Arecibo-Lares road	\$6,994.41
July 9, 1918	Reinforced concrete bridge, 20 meters long, over quebrada Achilote, on the Ciales-Juana Diaz Road	8,615.75
July 18, 1918	Reinforced concrete bridge, 88 meters long, over Valenciano River, Caguas-Humacao road	12,580.00
Aug. 3, 1918	Reinforced concrete culvert, 6 meters expand over quebrada Hicotea, Vega Baja-Morovis road	2,500.00
Dec. 10, 1918	3 kilometers of the San Sebastian-Las Marias road, kilometers 1-3	14,448.00
Feb. 7, 1919	4.6 kilometers of the Las Vegas-Maricao road, from kilometer 21.2 to 25.8	29,447.79
Feb. 20, 1919	4.6 kilometers of road No. 10, Corozal-Barros section, kilometer 7.7 to 12.2	30,401.00
Mar. 31, 1919	5 kilometers of road No. 8, Lares-Adjuntas, Alto Maldonado-Rio Yahuecas section	49,606.50
Mar. 31, 1919	Reinforced concrete bridge, 48 meters long, over Rio Grande de Arecibo, Lares-Adjuntas road	27,190.45
Apr. 28, 1919	6 kilometers of Ciales-Juana Diaz Road, Maria Olaya-Divisoria section	65,640.15
June 3, 1919	Reinforced concrete bridge, 90 meters long, over Rio Grande de Loiza on Road No. 23, Rio Piedras-Trujillo Alto	16,159.82
June 5, 1919	4 kilometers of Lares-Adjuntas road, Rio Blanco-Garganta Vilella section	40,656.50
Total contracted for		304,240.47

In addition to the construction above mentioned, the bureau of public works had under way all work that was contracted for prior to and continued during the fiscal year just ended and besides a certain amount of work which was being carried out by administration.

The following detailed statement shows the amount actually expended during the year on road and bridge construction:

Roads:		Bridges—Continued.	
Lares-Adjuntas.....	\$76,271.49	Quebrada "Los Romanos".....	\$5,702.55
Arecibo-Lares.....	74,428.17	Rio Santiago.....	7,480.64
Ciales-Juana Diaz.....	56,631.05	Quebrada Hicotes.....	2,782.23
Corozal-Barros.....	18,148.87	Rio Valenciano.....	18,004.50
Las Vegas-Maricao.....	20,678.33	Rio Grande de Loiza.....	13,718.22
Yauco-Lares.....	55,251.81	Quebrada Achote.....	8,615.68
San Sebastian-Las Marias.....	10,854.99		
Corozal-Morovis.....	14,556.62	Total.....	136,678.90
Bayamon-Toa Alta.....	10,265.73		
Vieques.....	17,126.88		
Bridges:		RESUMÉ.	
Fajardo-Caiba.....	5,826.05	Expended of road surveys including	
Rio Guayanes.....	17,896.55	right of way.....	40,134.96
Ingenio and Cortadera.....	3,242.18	Expended on road construction.....	343,212.84
Cano Yabucoa.....	22,346.94	Expended on bridge and culvert	
Rio Inabon.....	31,063.27	construction.....	136,678.90
Total.....	343,212.84	Total expended.....	520,026.70

The appropriations from which this expenditure of \$520,026.70 was paid, appear in the following subdivision:

Appropriation for the construction, maintenance, and repairs of public roads and bridges, fiscal year 1918-19..		\$2,000,000 road bond fund for road and bridge construction; act of 1916:	
Appropriation for the construction, maintenance, and repairs of public roads and bridges, fiscal year 1918-19..	\$13,183.19	Surveys.....	\$22,560.71
Special appropriations for bridges and roads construction acts of 1913, 1914, 1915, 1916, and 1917:	53,313.12	Construction of roads and bridges.....	345,770.94
Surveys.....	\$17,574.25		\$368,331.65
Construction of roads.....	36,561.22	Total.....	520,026.70
Construction of bridges.....	31,063.27		
	85,198.74		

Adding to the above noted expenditure of \$368,331.65 the expense of bond issue, which amounted to \$925.37, there is obtained the total of \$369,257.02, expended during the year as shown in the "General statement of appropriations and expenditures."

The inclosed table shows the amount expended from the \$2,000,000 bond prior to and during the past fiscal year on surveys and construction of the various roads and bridges:

Expenditures from road bond fund of \$2,000,000, Act of 1916.

Roads and bridges.	Years 1916-1918.		Year 1918-19.		Total.
	Survey.	Construction.	Survey.	Construction.	
Lares-Adjuntas.....	\$18,943.97	\$30,469.98	\$9,083.42	\$67,271.49	\$125,768.86
Ciales-Juana Diaz.....	11,934.46	32,181.37	2,448.37	56,631.05	103,195.25
Corozal-Barros.....	12,924.20	55,142.95	1,003.77	16,148.87	85,219.79
Utua-Lares.....	2,837.23				2,837.23
Mayaguez-Maricao.....	5,979.62	19,377.35	217.02	20,678.33	46,252.32
Yauco-Lares.....	4,392.33	29,802.58	5,467.03	50,225.38	89,887.32
Arecibo-Lares.....	580.08	63,556.88	377.69	74,428.17	138,942.82
Maricao-Indiera.....	2,402.57		1,169.41		3,571.98
Guayanes-River Bridge.....		7,011.98		17,896.55	24,908.53
Ingenio and Cortadera Bridges.....		8,432.37		3,242.18	11,674.55
Yabucoa River Bridge.....		390.27		22,346.94	22,737.21
Bridges over Quebradas Cieba, Emajagua, and Vueltas.....		16,469.00		5,826.05	22,295.05
Naguabo-Caiba Bridges.....	14.00				14.00
Vieques Road.....		8,111.00		11,075.93	19,186.93
Loiza-Juncos.....			2,485.12		2,485.12
Purchase and repairs of surveying instruments.....	918.87		308.88		1,227.75
Total.....	60,927.33	270,945.73	22,560.71	345,770.94	700,204.71
Plus expenses bond issue.....		775.99		925.37	1,701.36
Total expenditure to date.....					701,906.07

The total length of macadamized roads completed is 41.3 kilometers, distributed in the following manner:

	Kms.		Kms.
Arecibo-Lares.....	12.4	San Sebastian-Las Marias.....	1.0
Clares-Juana Diaz.....	9.0	Sayamon-Toa Alta.....	4.3
Yauco-Lares.....	4.0	Isla de Vieques.....	3.0
Lares-Adjuntas.....	2.6		
Las Vegas-Maricao.....	3.0	Total.....	41.3
Corozal-Barros.....	2.0		

A brief description of the different roads and bridges constructed during the year is given below:

Lares-Adjuntas Road.—This road is No. 8 in the general plan of insular roads, and beginning at Aguadilla, goes through the towns of Moca, San Sebastian, and Lares, ending at kilometer 32 of road No. 6, between Utuado and Adjuntas. The Aguadilla-Lares section of this road, which has a length of 38.5 kilometers, was completed and opened to traffic several years ago. The construction of the Lares-Adjuntas section was begun in the year 1908, and a stretch of 12 kilometers was completed between the town of Lares and Rio Blanco, which work was carried out with the \$1,000,000 road fund, approved by the legislature in 1906.

The work of construction on this section was continued during the last two years with the money from the \$2,000,000 road fund, approved in 1916, there having been let to date three contracts representing an aggregate length of 13 kilometers of road. The construction of this road was considered of very great importance, as its completion will open up one of the richest coffee sections of the island. On account of this, the economy commission assigned to this road the first place in the order of precedence created in 1916 for the different works to be constructed from the \$2,000,000 road fund.

As stated in last year's annual report, a contract was approved on January 21, 1918, for the construction of the first 5 kilometers of this road on the Adjuntas end between road No. 6 and the place known as Alto de Maldonado, at a contract price of \$65,444. The status of this work on June 30, 1919, was as follows:

Grading entirely finished, and also all bridging, with the exception of a 6-meter span culvert, which on account of its close proximity to the only quarry found in the whole section, could not be built until the stone necessary for paving had been quarried; 3 kilometers had been macadamized, and the necessary material for the remaining 2 kilometers was at hand.

A second contract was approved on March 31, 1919, calling for the construction of 5 kilometers of road included between Alto de Maldonado and Rio Yabucá, at a contract price of \$49,606.50.

At the end of the present fiscal year the work accomplished on this contract was as follows: Grading, 40 per cent finished; two 4-meter span culverts and one 3-meter span culvert had been finished; also five drain pipes 0.80 meter diameter.

On June 5, 1919, a third contract was made for the construction of 4 kilometers on the Lares end of this section of road included between Rio Blanco and Garganta-Vilella, the cost of this contract being \$40,656.50. The only work accomplished to June 30, 1919, was 25 per cent of the total volume of unclassified excavations.

In the preceding annual report attention was called to the great need of the construction of a bridge over the Rio Grande of Arecibo; at the junction of this road with road No. 6, Adjuntas-Utuado section, as without this bridge the new road could not be reached by motor vehicles. The department therefore prepared a project for the construction of this bridge, and a contract was approved on March 31, 1919, for the sum of \$27,190.45.

The site chosen for the bridge was an ideal one for the construction of two circular arches, on account of the great height of the finished grade of the road over the river bed, and also because the abutments could be founded directly on the natural rock on the river banks; but as the estimate for this project reached the sum of \$42,000 it was decided, for economical reasons, to design a bridge consisting of two straight spans 14 meters long each, composed of four plate girders having a depth of 36 inches and a length of 50 feet each, incased in concrete so as to harmonize with the remainder of the structure. At the abutments and central piers will be constructed three concrete arches of 3 meters span each, increasing in this way the area of discharge. The abutments, piers, and arches on this bridge are of plain concrete, while the bridge floor and railing are built of reinforced concrete.

On June 30 the abutments, central piers, and arches were finished as far as the girder level. Also about 50 per cent of the grading that had to be done in order to improve the approaches to the bridge had been completed.

The total amount expended during the year in the construction of this road is as follows:

First contract of Jan. 21, 1918.....	\$25,935.93
Second contract of March 31, 1919.....	14,019.58
Third contract of June 5, 1919.....	4,140.00
Fourth contract, bridge over Rio Grande de Arecibo.....	16,444.49
Inspection.....	6,731.49
Total expenditure to June 30, 1919.....	C7 271.49

This expenditure was paid from the \$2,000,000 road bond fund.

Arecibo-Lares Road.—As stated in last year's annual report, this road should have been completed by December 18, 1918, but on account of the many difficulties experienced, such as heavy rains, earthquakes, influenza, and the compulsory military service, the work could not be sufficiently pushed so as to finish it at the time specified in the contract. Of a total of 14.4 kilometers under construction 12.4 kilometers were finished during the year, the other 2 kilometers having been completed the previous year.

The contract approved in March, 1918, for the construction of the last 9 kilometers of this section of road amounted to \$65,430, but on account of the uncertainty of selling the bonds while the war continued, several culverts, the cost of which was estimated at \$16,836.78, were not included in the project. The construction of a reinforced-concrete bridge over Quebrada "Anón" and the repairs of an old bridge over the Guajataca River, which work amounted to \$6,944.91, was decided upon after the funds from the second bond issue of \$500,000 were available. Several changes in the location were introduced so as to improve the alignments, eliminate curves, and avoid the construction of several retaining walls.

The completion of this road is of very great importance for the towns of Lares and Arecibo, as the distance between San Juan and Lares will be shortened by 61 kilometers. There is therefore great interest on the part of the public that traffic be allowed on this road as soon as the macadamizing is completed.

The provisional acceptance of this road will be made by the bureau of public works by the end of October, 1919. This road will be the first one to be entirely completed from the \$2,000,000 road bond fund. The total amount expended in this construction to June 30, 1919, is \$149,600.48, of which \$137,985.05 was paid from the \$2,000,000 road bond fund and \$11,615.43 from a special appropriation of \$60,000 approved by the legislature in March, 1913.

Ciales-Juana Diaz Road.—This road is No. 11 in the general plan approved for insular roads. Beginning at the town of Ciales it crosses the Main Divide, goes through the town of Villalba and connects at Juana Diaz with Road No. 1, San Juan-Ponce. It has a total length of 55 kilometers of which 18 were constructed in 1906 from the \$1,000,000 bond issue approved at that time. Of the first 18 kilometers built, 13 were constructed between Ciales and Cialitos, and 5 kilometers from the town of Villalba toward the Main Divide.

The section of this road between Juana Diaz and Villalba had not been built for various reasons: (1) Because the municipal road between these two towns was in fairly good condition; (2) the irrigation service contemplated as a part of the irrigation system for the south coast, the construction of a reservoir at the place known as Guayabal, and not knowing at that time what the height of the water would be, it was necessary to carefully study a new project for this road, so that it would fall entirely outside of the zone occupied by the reservoir.

After surveys for these two sections of road were completed in 1917, the construction of 3½ kilometers between Destierro and Guayabal was undertaken, and to this end a contract was approved on December 20, 1917, for the sum of \$27,488.70. The work was carried out as specified in the contract and was provisionally accepted on February 28, 1919, at a cost of \$32,339.44, which shows an increase of \$4,850.74 over the original contract, this being caused by changing the width of the roadbed to make it conform with standard section No. 2 instead of No. 3 as originally projected.

There was also an excess in culvert construction as two of these were not included in the original estimate and another one had to be constructed larger than the one designed so as to take care of extraordinary floods.

On April 1, 1918, a second contract was approved for the sum of \$55,109.53, calling for the construction of the remaining 8 kilometers between Juana Diaz and Destierro, crossing the Jacaguas River by means of a bridge built by the irrigation service at Guayabal Dam. The work of construction has been carried out in accordance with the terms of the contract and to date is almost completed, only the macadamizing of the 2 kilometers at the Juana Diaz end remaining to be done. It is desired to call special attention to the culverts constructed in this section of road, which on account of their very fine appearance and good workmanship, are undoubtedly among the best constructed on the island. The completion of this section of road is eagerly awaited, due to the fact that the municipal road utilized at present between Juana

Diaz and the Guayabal dam, has been entirely neglected by the municipality, being in such a bad condition that during the rainy season it can hardly be used by automobiles.

A third contract was approved on April 28, 1919, for the sum of \$65,640.15, which included the construction of 6 kilometers of road between the creek known as Maria Olaya and the Main Divide of the island. The work of construction was begun in May, 1919, and to June 30, of the same year, 5 per cent of the total volume of unclassified excavation had been completed.

The total expenditure during the fiscal year on the several contracts of this road is as follows:

First contract, construction of 3½ kilometers of road between Destierro and Villalba.....	49,837.30
Second contract, construction of 8 kilometers between Juana Diaz and Destierro.....	41,801.74
Inspection.....	4,992.01
Total.....	56,631.05

This sum was paid from the \$2,000,000 road bond fund of 1916.

Corozal-Barros Road.—From the \$1,000,000 fund authorized in the year 1906 the sum of \$30,000 was set aside for the construction of 6 kilometers of this road, starting from the town of Corozal, which were completed by the year 1909, when further work was prevented by lack of funds.

The Corozal-Barros section of Road No. 10 is on the list approved by the economy commission in 1916, to be built from the \$2,000,000 road bond fund. On October 3, 1917, a contract was let for the construction of 2½ kilometers of road and in a reinforced concrete bridge 30 meters long, over Corozal River. The work was completed by August 1, 1918, at a cost of \$44,569.94. As the 6 kilometers built in 1909 were in very bad condition it was necessary to reconstruct the macadam, and for this purpose the sum of \$13,248.30 was set aside. Of this sum, the amount of \$7,950 was used in the purchase of 3,000 cubic meters of broken stone, and the remaining \$5,298.35 was assigned for the placing of the stone and opening ditches.

As soon as there was money available from the second issue of \$500,000 of road bonds, from the \$2,000,000, a contract was approved for the sum of \$30,401, which included the construction of 4.7 kilometers of road between kilometers 8½ and 12, which will bring the construction of this road as far as the divide between the rivers Corozal and Mata Cañas.

On June 30, 1919, the status of the work was as follows: Unclassified excavation, 70 per cent completed; three concrete drain pipes and the masonry repairs for a 5-meter span culvert over Quebrada Piedras, were also finished. The amount expended on this work during the fiscal year is \$16,148.87.

As the contractor of this portion of road has not displayed the necessary activity for the rapid completion of the same, in spite of all the efforts made by the bureau of public works, it is very probable that the contract will be canceled and the work of construction will have to be completed by administration. The impatience shown by the public at the slow way in which the contractor has been working to date proves that the farmers of this region are greatly interested in having this road completed as soon as possible.

Mayaguez-Maricao Road, via Las Vegas.—By an act of the legislature approved March 14, 1907, the sum of \$120,000 was appropriated for the construction of several insular roads among which was included the section between Mayaguez and Maricao by way of Las Vegas. The amount of \$39,000, assigned for this purpose, was not considered sufficient to follow another route, so as to avoid steep grades and the curves of 10 and 15 meters radius, which existed in the old municipal road between these towns. For this reason it was decided to improve this municipal road, as is noted in that part of this report dealing with the construction and maintenance of roads and bridges. The work consisted mainly in the building of small concrete structures, and the macadamizing of the old roadbed throughout a length of 16.3 kilometers beginning at Mayaguez. The expenditure on this construction amounted to \$43,000.

Later, in the year 1911, surveys on the section of the road between Las Vegas and Maricao were made, and during the year 1915, the construction of 3½ kilometers was completed, making a total of 19.8 kilometers. This road which is No. 5 in the order of precedence approved by the economy commission in 1916, is therefore among those to be built from the \$2,000,000 road bond fund. When the bonds were sold, a contract was approved on October 18, 1917, for the sum of \$18,490.27, which provided for the construction of 3 kilometers of this road. This construction was completed in July, 1918, and as soon as the second issue of \$500,000 bonds was sold in 1916, a new contract was let for the completion of the road as far as Maricao, which was approved on February 7, 1919, for the sum of \$29,447.79, not including the cost of reconstruction of the bridge over Maricao River. The work

done to June 30, consists of all excavations, bridge work and 2 kilometers of macadam. The amount invested during the fiscal year is \$20,678.33. This road and the Arecibo-Lares road will be the first two roads which are entirely completed in accordance with law No. 71 of April 13, 1916, generally known as the \$2,000,000 road bond fund.

Yauco-Lares Road.—This road, known as No. 16 in the general plan of insular roads, starts at the town of Yauco, crosses the Main Divide at kilometer 21, and then follows in part the location of Road No. 14, Maricao-Indiera, connecting with the Adjuntas-Lares section of Road No. 8 at barrio "Bartolo" in Lares. The total length of the section between Yauco and Bartolo is approximately 38 kilometers, 19 of which from the Yauco end have already been completed and opened to the public. Out of these 19 kilometers those between kilometers 2 and 9 were built in previous years and also some of the grading between kilometers 19 and 21. The zone which this road serves is one of the richest of the island and also one of the most abrupt, as is shown by the elevation at kilometer 19, which is about 800 meters above the sea level.

By a special law enacted by the legislature in 1913, \$60,000 were appropriated to continue the work of construction, and this sum was expended in the completion and reconstruction of the section included between kilometers 9 and 15, and also the grading between kilometers 15 and 18. A reinforced concrete bridge over Vega River at kilometer 10 was also built, this work being paid from a special appropriation approved in 1913 for the construction of bridges over Rivers Vega and Duey, near Yauco.

On July 8, 1916, when the order of precedence was established by the economy commission for the construction, to be paid from the \$2,000,000 road bond fund, this road was placed as No. 6, and as soon as the money was available the construction of two sections of the road was undertaken, one from Yauco to kilometer 2 and the other between kilometers 15 and 21.

To carry out the construction of the section between kilometers 0 and 2, a contract was approved on August 1, 1917, for the sum of \$9,700, which was completed in April, 1918, at a total cost, without including inspection, of \$9,749.45. Out of this sum, \$808.58 were paid from the appropriation of \$60,000 above mentioned, which was approved in 1913, and the remaining \$8,940.87 were paid from the \$2,000,000 road bond fund.

The contract for the construction of the section between kilometers 15 and 21 was approved on January 1, 1918, for the sum of \$53,000.

On May 31, 1919, the work already constructed amounted to \$68,788.27, and there still remained to be done the macadamizing and bridging from kilometers 19 to 21. This excess over the original contract price was for the following reasons:

(1) As there was some uncertainty in regard to the selling of the second \$500,000 from the road bond fund, the cost of four large culverts was not included in the contract, which afterwards were designed and built.

(2) In the original project the width of the roadbed approved was that which corresponds to third-class roads, which in cuts was 6½ meters wide, but as there was money available, and taking into consideration the importance of this road, it was decided to change this width, making it 6.75 meters in cuts and 6 meters in fills, corresponding to the section of second-class roads. This change increased, therefore, the volume of unclassified excavations, and also the amount of broken stone for the macadam surface, as this latter had been calculated for a width of only 4 meters, which afterwards was changed to 4½ meters.

(3) The earthquake that took place in October, 1918, caused large cracks on the side slopes, so that great slides took place, the removal of which increased the cost of construction.

This extra work, which was not included in the original contract, will probably effect an increase of nearly \$28,000.

As on May 19, 1919, there had already been an excess of over 20 per cent in the quantities of the contract, an agreement was made with the contractor to continue the work at new unit prices for all the quantities in excess of this 20 per cent provided in the general conditions for the contract of insular public works. A term of five months was given the contractor in which to finish up the remaining work of this contract.

The total amount expended during the fiscal year on the construction of this road amounted to \$55,251.81, and to June 30, 1919, the work executed was 4 kilometers, between 15 and 19 entirely completed and also the grading as far as kilometer 21.

Corozal-Morovis road.—This road is a section of No. 20 in the plan approved, and begins about 4 kilometers from the town of Corozal and ends at the town of Morovis, having a length of 12 kilometers.

The first appropriation for this construction was approved by the legislature in March, 1913, assigning the sum of \$25,000, of which sum there had been expended in surveys the amount of \$5,598.88, and the balance, \$19,404.12, was designated to carry out the construction.

A contract was approved on June 17, 1918, for the amount of \$13,370, which provided for the construction of 2½ kilometers of grading and excavations of side ditches. The work was carried out as per contract and it was received finally on January 10, 1918, when the 10 per cent of the contract retained was paid the contractor.

The amount expended on this construction is \$13,635.75, and the total expenditure during the year was \$14,556.52, remaining a balance of \$1,124.30 from the appropriation of \$25,000 assigned by the legislature for this road. The construction of this road will be continued as soon as there are funds available from the proceeds of the second \$1,000,000 from the road bond funds.

Bayamon-Toa Alta road.—In last year's annual report a brief description is given of the work executed on this road in compliance with the act approved on April 13, 1917, appropriation \$25,000 for this work. With this sum the construction of the first 4 kilometers of this road as far as "Escache" Creek was undertaken and carried out by means of convict labor.

A contract was let for the sum of \$4,000 for the construction of several drainpipes and a reinforced concrete culvert 6 meters span over "Escache" Creek. This work was completed as provided in the contract, and the cost of the same was \$5,164.01, which shows an excess over the original contract price due to changing the width of this culvert from 5 to 6 meters and also on account of the foundation of the bridge, which had to be lowered on account of the poor soil encountered. These structures were finally accepted on July 24, 1918, when the contractor was paid the 10 per cent retained from his contract.

The total length of road macadamized is 4.3 kilometers, and it was opened to the public on February 28, 1919, the date on which it was finished.

The total amount expended from the appropriation of \$25,000 previously mentioned is \$23,589.96, there remaining a balance of \$1,410.04 due to the repayment made by the department of justice for food supplied to convicts. As this reimbursement was not made at the proper time, it was necessary, in order not to suspend the work, to assign the sum of \$4,161.20, paid from the appropriation for the construction, maintenance, and repairs of public roads and bridges corresponding to the present fiscal year. This sum, added to the above-mentioned expenditure of \$23,589.96, makes a total expended to date on this construction of \$27,751.16.

As the appropriation of \$25,000 approved in 1917 has been exhausted, and as this road is No. 30 in the order of precedence approved by the economy commission, no further work of construction can be undertaken at the present time on this road unless some new appropriation be assigned for this purpose.

Vieques road.—Work of construction on this road was begun in the year 1908, when about 0.9 kilometers were built at a cost of \$2,000, which was paid from the appropriation of \$120,000, approved by the legislature in March, 1907, for the construction of insular roads. Owing to the great difficulties in getting laborers for this work, the construction is being carried out by administration with the aid of convict labor. The work was continued from an appropriation of \$200,000 approved in 1908, and up to the year 1910 there had been completed 5 kilometers of road, which were afterwards abandoned on account of lack of funds.

From this date on the construction was suspended until the fiscal year 1916-17, when work was again started with the balance of \$16,435.47 remaining from the appropriation approved in March, 1913, for this road. This amount was entirely exhausted during the previous fiscal year, and then the sum of \$11,000 from the \$2,000,000 road bond fund was assigned to continue the work of construction, which ranks seventh in the order of precedence established by the economy commission.

The work done during the year consists in the completion of 2 kilometers of road, including all the bridging, and also the macadamizing of the first kilometer near the town of Isabel II, which had never been paved. Two culverts, of 1 and 4 meters spans, respectively, with wooden floors, were reconstructed with reinforced concrete slabs with the corresponding wheel guards.

The total amount of work accomplished to date is as follows: 9.6 kilometers of macadam completed; 12 culverts completed, among which are two having spans 6 meters each, three with 4-meter spans, and one 3-meter span. In addition there were also built the two reinforced concrete slabs in the first kilometer and another slab at kilometer 4.

Owing to the uncertainty as to whether the second \$500,000 from the \$2,000,000 road fund could be sold, when the \$11,000 assigned for this construction were exhausted, the work has continued from the appropriation for the construction, maintenance, and repairs of public roads and bridges corresponding to the present fiscal year, from which appropriation was expended the amount of \$6,031.20.

The total amount expended in this construction during the present fiscal year is \$17,125.88, \$11,075.93 of which were paid from the \$2,000,000 road fund, \$6,031.20 from

the construction, maintenance, and repairs of roads and bridges, fiscal year 1918-19, and \$18.75 from the appropriation No. 232 approved for the construction of this road.

San Sebastian-Las Marias Road.—The legislative assembly approved on March 13, 1913, an act appropriating the sum of \$20,000 for the construction of this road. Surveys were made of the first 6½ kilometers of road, and also a traverse was completed which will serve as a basis for the rest of the location.

After the surveys were made there was a balance in this appropriation of \$17,979.15, with which sum it was proposed to construct the first 3 kilometers. To carry out the work of construction, a contract was approved on December 20, 1918, for the amount of \$14,448.

The work has been going rather slow, on account of the many difficulties encountered by the contractors, such as frequent rains, influenza, and earthquakes. On June 30, 1919, the work done was as follows: Grading and bridging were entirely finished, 1 kilometer had been paved, and sufficient broken stone was at hand to complete another kilometer.

The first kilometer of this road follows the municipal road between San Sebastian and Las Marias, at the end of which the municipal road was carried over the "Culebrinas" River by means of an old bridge 14 meters long, which consisted of a wooden floor on masonry abutments. This bridge was in such a bad condition that it was decided to repair it, and to this end a central pier was built, thus converting the old single-span bridge into a two-span structure of 7 meters each. To help out in this work the municipality of San Sebastian contributed the sum of \$250.

After the central pier was built it was decided to construct a reinforced concrete slab, instead of repairing the old wooden floor, for which work a contract was approved for the sum of \$1,763.44. The work consisted in the construction of rectangular reinforced concrete beams 30 centimeters wide and 60 centimeters deep, which support the floor slab on which rests the macadam pavement of the roadway.

The work of construction was carried out in accordance with the plans and specifications, and by the end of the fiscal year it was nearly completed. The sum of \$1,710.68 was expended during the year on this bridge, which was paid from the appropriation for the construction, maintenance, and repairs of public roads and bridges, fiscal year 1918-19.

The amount expended on this road during the year is \$10,854.99, paid from the special appropriation approved for this work on March 13, 1913, as mentioned above. The total expenditure on the work of construction on both the road and bridge is \$12,565.57.

Reinforced concrete bridge over Santiago River on Road No. 3, Naguabo-Humacao section.—This section of Road No. 3 crosses several large streams, over which were built some years ago temporary wooden structures, which were in such a bad condition that it was decided to replace them with permanent structures.

One of these bridges, known as "Santiago," over the river of that name, was in such condition as to demand immediate repairs. Instead of doing this, the department projected the construction of a reinforced concrete bridge at an estimated cost of \$20,000, and on October 30, 1917, a contract amounting to \$19,199 was approved to carry out the construction.

The structure consists of nine straight spans 7 meters centers, formed by 15-inch steel I beams. These beams are incased in concrete, and are supported by piers of the same material founded on concrete piles 40 feet long. On the I beams was placed a reinforced concrete slab 20 centimeters thick and on this slab was built the asphalt pavement. The abutments are built of plain concrete founded on wooden piles. The structure is provided with a handsome reinforced concrete railing.

The workmanship displayed on this bridge is first class, and in appearance this bridge is one of the best constructed. The bridge was finally accepted on January 20, 1919, at a cost of \$19,792.22, which was paid from the appropriation for the construction, maintenance, and repairs of roads and bridges, corresponding to the fiscal year 1917-18.

Bridges on Road No. 3, Ponce-Guayama section.—The need for the construction of bridges over the Bucana, Inabon, Jacaguas, Descalabrado, and Coamo Rivers, which cross this section of road, has long been felt, and in order to put an end to the inconvenience to traffic arising from the interruption caused by floods which occur very frequently during the rainy period the legislature approved on April 2, 1917, a law appropriating the amount of \$70,000 for the construction of these bridges.

Two of these structures were begun during the previous fiscal year, one over Bucana and the other over the Inabon. The bridge over the Bucana was entirely completed in the last fiscal year at a cost of \$14,737.31. On September 1, 1918, the bridge was finally received, when the sum of \$1,485.51, representing the 10 per cent of the contract retained, was paid the contractor.

The bridge built this year over the Inabon River is composed of three reinforced concrete arches 15 meters span each. These arches are composed of three ribs, the two latter ones having a width of 75 centimeters, and the central one a width of 1½ meters, and these ribs support columns 1 meter thick on which rests reinforced concrete slabs, 3.25 meters span. On these slabs was placed an earth fill on which was constructed the macadam pavement. The piers and abutments are of plain concrete founded on wooden piles, and the bridge is finished with a reinforced concrete railing of pleasing design. The probable cost of this work when completed will be \$34,665.56.

The amount expended on this bridge during the year is \$31,063.27, and the total expenditure to date in all the bridges amounts to \$46,075.61, a balance of \$23,924.39 remaining in this appropriation on June 30, 1919. It is the intention of the department to dedicate the balance remaining after the Inabon bridge is finally liquidated, to the construction of one of the bridges which still remain to be built.

Bridges on Road No. 3, Humacao-Yabucoa section.—Among the structures to be built from the \$2,000,000 road bond funds, are found the bridges on the Humacao-Yabucoa section of Road No. 3, which stands number eight on the list of precedence established by the economy commission.

Of these bridges the most important ones are those over Ingenio River, Cortadera Creek, Guayanes River, and Yabucoa River, as these streams very often interrupt traffic with their frequent floods during the rainy season. For this reason, as soon as there were funds available from the first issue of \$500,000, the projects of these four bridges were completed and contracts were let for their construction.

The first contract was approved on January 20, 1918, for the amount of \$10,045.71, which included the construction of two reinforced concrete bridges over Ingenio River and Cortadera Creek.

The bridge built over Ingenio River is a single-span structure 9½ meters long formed by five reinforced concrete beams, which support a floor slab 20 centimeters thick, on which was placed an asphalt pavement 1 inch thick. The abutments and wing walls are of plain concrete founded on wooden piles.

About 100 meters from this bridge is found the one built over Cortadera Creek which consists of a single span 6 meters long. This span is formed by a reinforced concrete slab 45 centimeters thick resting on abutments of plain concrete founded on wooden piles.

Both these bridges were completed as per contract and were received provisionally on September 15, 1918. On January 15, 1919, the structures were finally accepted and the contractors were paid the 10 per cent of their contracts which have been retained. The total cost of these two bridges amounted to \$10,950.16, without including the cost of inspection.

On February 11, 1918, a second contract was approved for the amount of \$17,353.21, which called for the construction of a reinforced concrete bridge over Yabucoa River. The work of construction on this bridge was greatly retarded on account of the many difficulties met by the contractor, and for this reason it took him a whole year to complete the job. This bridge was not built strictly according to the plan, as some changes were introduced in the project, such as the raising of the floor level 60 centimeters higher than projected, and omitting entirely the construction of a 3-meter span arch culvert.

The structure is composed of two skew spans 10 meters long each, formed by I-beams incased in concrete, which carry a reinforced concrete floor slab 8 inches thick at the center and 6 inches at the sides. The bridge is provided with a hand railing of 2-inch galvanized iron pipe. The bridge floor is treated with an asphalt pavement 1 inch thick. The work of construction was finished on February 21, 1919, when the bridge was provisionally accepted, having cost the sum of \$23,445.53.

For the construction of the bridge over Guayanes River, which is the largest of all these streams, a contract was approved on March 15, 1918, for the amount of \$18,400.

This bridge, having three spans 10 meters long each, was built of reinforced concrete beams carrying a floor slab 15 centimeters thick. These reinforced beams are supported on piers and abutments of plain concrete founded on wooden piles 10-inch diameters and 15 feet long. The bridge has been provided with a handrail built of 2-inch galvanized iron pipe.

The structure was constructed entirely in accordance with the plans and specifications, and was provisionally accepted on November 26, 1918. It was finally received on March 26, 1919, when the contractor was paid the 10 per cent retained from his contract, with the exception of a sum amounting to \$148.18 which represents a claim made against the contractor. The total cost of this bridge, not including inspection expenses, is \$20,592.51.

The total expenditure on all these bridges to June 30, 1919, was \$59,320.29.

Bridge over Los Romanes Creek on Road No. 3, Aguadilla-Lares section.—At Kilometer 16.6 on the Aguadilla-Lares Road there was a temporary bridge over "Los Romanes" Creek which was in such a bad shape as to constitute a menace to the traveling public, so that it became necessary either to repair this old bridge or to build a new one in its place. The department decided to construct an entirely new bridge instead of repairing the old one, and to this effect a contract was let for the amount of \$5,794.

The bridge is a single-span structure 10 meters long, with five reinforced concrete beams 0.40 by 0.70 meters, and on these is carried the bridge floor which consists of a reinforced slab 15 centimeters thick, which supports the macadam pavement. The bridge is finished with a railing made of 2-inch galvanized iron pipe.

This bridge should have been finished a long time before the date it was received, but the delay in the construction was in part justified, as the contractor did not get the steel for the reinforcement at the specified time owing to the poor means of transportation due to the state of war. The work was carried out as provided in the contract and the bridge was provisionally accepted on April 28, 1919. The total amount expended on this construction during the year was \$5,702.55, which was paid from the appropriation for the construction, maintenance, and repairs of public roads and bridges, corresponding to the fiscal year 1917-18.

Bridge on road No. 3, Fajardo-Ceiba section.—The bridges remaining to be built on this section of road were 3 small structures over Vueltas, Emajagua and Ceiba Creeks, the construction of which was carried out, under contract approved on February 6, 1918, at a contract price of \$17,713.

The bridges over Ceiba and Emajagua Creeks are of the same type, consisting of a single span 10 meters long formed by rectangular reinforced concrete beams, carrying a reinforced concrete floor slab. The beams rest on plain concrete abutments resting on a wooden pile foundation. The bridge built over quebrada Vueltas consists of a reinforced concrete slab 6 meter span, supported by plain concrete abutments.

These structures were constructed according to the terms of the contract, and were provisionally accepted on August 1, 1918, and finally, on November 1, 1918. The cost of the same, without including inspection expenses, amounted to \$21,111.41, and the total expenditure during the year on all three bridges was \$22,295.05, paid from the \$2,000,000 road bond fund.

Bridge over Hicotea Creek on Vega Baja-Morovis Road.—At kilometer 7.7 on the Vega Baja-Morovis Road, there was a temporary bridge over Hicotea Creek, consisting of a wooden floor supported by abutments built of dry laid masonry. This bridge was in such a bad state that it required immediate repairs, but the department decided to build an entirely new structure in place of the old one, a contract for same was let on August 3, 1918, for the amount of \$2,500.

The work of construction was carried out as specified in the contract and the bridge was provisionally accepted on November 15, 1918. On April 28, 1919, the final acceptance was made and the contractor was paid the retained 10 per cent of his contract.

The total amount expended in this construction was \$2,499.98, which was paid from the appropriation for the construction, maintenance, and repairs of public roads and bridges, corresponding to the fiscal year 1918-19.

Reinforced concrete bridge over Rio Grande de Loiza, on Road No. 7, Las Piedras-San Lorenzo section.—The Rio Grande de Loiza crosses this section of road at the entrance of the town of San Lorenzo. Owing to the large flow of this river, the fording place could not be utilized by motor vehicles without great inconvenience, so that the road was really of no great value to this kind of transportation, unless a bridge was built at this place. To carry out the work of construction, a contract was approved on June 17, 1918, at a contract price of \$12,550.

The bridge projected was made up of 11 spans of reinforced concrete slabs 55 centimeters in depth, resting on monolithic concrete piers founded directly on the rock. As the funds available for this work were not sufficient the structure was projected with a width of only 3 meters, and at such a height that during the extraordinary floods it is entirely submerged.

The work was done as per contract and finished October 7, 1918, and on February 5, 1919, it was finally accepted. The total cost of the bridge was \$13,284.89, which sum was paid from the appropriation for the construction, maintenance, and repairs of public roads and bridges, for the fiscal year 1918-19.

Reinforced concrete bridge over Valenciano River, on Road No. 5, Caguas-Humacao section.—This section of road crosses the Valenciano River near the town of Juncos, and owing to the sandy nature of the river bed, it could not be crossed by motor vehicles without difficulties, so that it was necessary to build a temporary wooden structure. To substitute this wooden bridge, a reinforced concrete structure 4 meters wide and 88 meters long was projected.

A contract was approved on July 18, 1918, for the sum of \$12,580 to carry out the construction of this bridge. As the people of this part of the island showed their desire to contribute with a certain amount in order that the bridge be constructed wider than projected, the department agreed to introduce this change, and to this end an additional contract was approved for the amount of \$3,500.06, by which the bridge was given a width of 5.5 meters. The bridge is made up of 11 spans 8 meters long, each formed by reinforced concrete slabs 60 centimeters thick in the center and 55 on the sides resting on concrete piers founded on concrete piles 25 feet long. The abutments and retained walls are of plain concrete on a wooden pile foundation. An asphalt pavement 1 inch thick was spread over the floor slab. The bridge is provided with a low hand rail built of galvanized iron pipe.

This bridge has been constructed at such an elevation that it can be utilized during ordinary floods, being submerged only during extraordinarily high floods. The work of construction was carried out as per contract and the bridge was provisionally accepted on January 6, 1919, and on May 2, 1919, finally accepted. The cost of this structure was \$15,262.86, which added to the \$3,500.06 expended on the widening of the bridge, brings the total cost of the same to \$18,762.92. Of this total sum \$1,335 were contributed by several proprietors of that locality, and \$17,427.92 were paid from the appropriation for the construction, maintenance, and repairs of public roads and bridges, fiscal year 1918-19.

Bridge over the "Achiote" stream on the Ciales-Juana Diaz Road, section between Destierro and Villalba.—This road on the outskirts of the town of Villalba crosses the Achiote Brook, whose flow has been considerably augmented by the diversion into it of the Toro Negro River, a tributary of the Manati River, for the purpose of increasing the supply of water available for irrigation purposes in the southern district.

Since there were not enough funds for the purpose available from the \$2,000,000 loan, it was decided to undertake the construction and to charge the expenses thereof to the appropriation for the construction, maintenance, and repairs of roads and bridges for the fiscal year 1918-19, and hence on July 9, 1918, a contract was entered into for its construction amounting to \$8,615.75.

The bridge as designed consisted of two spans 10 meters long, with five beams spaced 1.25 meters on centers, each having a height of 50 centimeters and a width of 40 centimeters reinforced with Kahn bars. The beams were to be supported by monolithic concrete abutments and pier, the foundations of which were carried down to solid rock. The beams were to support a floor slab 15 centimeters thick, reinforced longitudinally with $\frac{1}{4}$ -inch round bars. The bridge was built as designed and was finally accepted on January 31, 1919, on which date the contractor was paid 10 per cent of the contract price which had been retained. The total cost of the bridge, excluding inspection expenses, was \$8,615.78.

Summing up, the amounts expended during the year in the various construction works undertaken and charged to the \$2,000,000 loan, authorized by law No. 71 of April, 1916, are distributed as follows:

Roads:		
Lares-Adjuntas.....	\$67,271.49	
Ciales-Juana Diaz.....	56,631.05	
Corozal-Barros.....	16,148.87	
Mayaguez-Maricao.....	20,678.33	
Yauco-Lares.....	50,225.38	
Arecibo-Lares.....	74,428.17	
Vieques.....	11,075.96	
		\$296,450.22
Bridges:		
Guayanes.....	17,896.55	
Ingenio and Cortadera.....	8,242.18	
Yabucoa.....	22,346.94	
Vuelitas, Emajagua, and Ceiba Brooks.....	5,826.05	
		49,311.72
Total for roads and bridges.....		345,770.94

Statement showing the roads and bridges to be constructed with the \$2,000,000 bond issue authorized by law No. 71, approved in 1916.

No. of precedence.	Road or bridge.	Total length in—	Length constructed up to 1916.	Length to be constructed with the \$2,000,000.	Length constructed up to June 30, 1919.	Length to be constructed	Approximate cost until completion.
		<i>Kms.</i>	<i>Kms.</i>	<i>Kms.</i>	<i>Kms.</i>	<i>Kms.</i>	
1	Lares-Aguajuntas Road ¹	48.3	12.9	36.0	14.0	22.0	\$231,000
2	Arecibo-Lares Road.....	34.0	19.5	14.5	14.5		
3	Ciales-Juana Diaz Road.....	51.0	18.0	33.0	17.5	15.5	162,750
4	Corozal-Barros Road.....	33.0	6.0	27.0	6.5	20.5	205,000
5	Mayaguez-Maricao Road.....	26.2	26.2	0.0	6.0		
6	Yanco-Lares Road.....	40.0	15.0	25.0	12.0	13.0	141,700
7	Vieques Road.....	15.0	5.0	10.0	5.0	5.0	35,000
8	Bridges on Humacao-Yabucoa Road ¹						42,000
9	Bridges on Fajardo-Ceiba Road ²						4,500
10	Bridges on the Naguabo-Ceiba Road.....						45,000
11	Maricao-Indiera Road.....	18.0		18.0		18.0	170,000
12	Naguabo-Juncos Road.....	19.5	9.5	10.0		10.0	90,000
13	Corozal-Morovis Road.....	8.0		8.0		8.0	64,000
14	Comerio-Cidra Road.....	12.0		12.0	3.0	9.0	94,500
15	La Muda-Guaynabo Road.....	4.0		4.0		4.0	40,000
16	Loiza-Juncos Road (10 kilometers).....	10.0		10.0		10.0	90,000
17	Hormigueros-Mayaguez Road.....	3.0		3.0		3.0	15,000
18	San Sebastian-Las Marias Road.....	15.0		15.0	3.0	12.0	96,000
19	Utua-Lares Road.....	20.0		20.0		20.0	200,000
20	Barceloneta-Utuado Road.....	20.0		20.0		20.0	210,000
21	Jayuya-Barros Road.....	20.0		20.0		20.0	200,000
22	Comerio-Aguas Buenas Road.....	15.0		15.0		15.0	175,000
23	Corozal-Naranjito Road.....	10.0		10.0		10.0	120,000
24	Utua-Jayuya Road.....	25.0		25.0		25.0	300,000
25	San Lorenzo-Patillas Road.....	45.0		45.0		45.0	500,000
26	Cayey-Salinas Road.....	30.0		30.0		30.0	400,000
27	Barros-Coamo Road (10 kilometers).....	10.0		10.0		10.0	125,000
28	San German to Las Vegas Road.....	30.0		30.0		30.0	300,000
29	Bayamon to Comerio-Aguas Buenas Road.....	25.0		25.0		25.0	300,000
30	Bayamon-Toa Alta Road.....	10.0		10.0	3.0	7.0	70,000
31	Albionito to Cayey-Salinas Road.....	25.0		25.0		25.0	320,000
32	Añasco-San Sebastian Road.....	25.0	3.0	22.0		22.0	250,000
33	Camuy-San Sebastian Road.....	30.0		30.0		30.0	360,000
34	Loiza-Juncos Road (completion).....	25.0		25.0		25.0	250,000
35	Loiza-Loiza Aldea Road ³	8.0					
36	Bridge over Valenciano River ⁴						75,000
37	Bridges on Humacao-Naguabo Road.....						10,000
38	Bridge over Bayamon River, wooden.....						10,000
39	Bridge over La Plata River, wooden.....						20,000
40	Bridge over Coamo River.....					20.0	200,000
41	Cabo Rojo-Lajas Road.....	20.0		20.0		20.0	200,000
42	Lajas Guanica Road.....	20.0		20.0			
43	Bridge on Trujillo Alto Road ⁵						
	Total.....	750.0	108.5	641.5	92.5	549.0	6,121,450

¹ Bridges over Ingenio, Cortadera, and Guayanes Rivers and Caño Yabucoa already constructed.

² Bridges over Quebradas, Vueltas, Emajagua, and Ceiba already constructed.

³ It is estimated that with the \$2,000,000 bond issue will be constructed the roads and bridges included up to No. 14, with a total length of 199.5 kilometers.

⁴ It is estimated that with the \$2,000,000 bond issue authorized by the last legislature will be constructed the roads included from Nos. 15 to 22 with a total length of 107 kilometers.

⁵ 8 kilometers reconstructed with the maintenance funds.

⁶ Constructed with the maintenance funds.

The total length to be constructed with the \$3,000,000 authorized by law is figured to be 306.5 kilometers.

SURVEY AND PROJECTS OF NEW ROADS AND BRIDGES.

The organization in charge of this work was as follows:

Office force.—One engineer and two assistants in charge of the designs of bridges, assisted by six draftsmen. Another engineer in charge of the field force or surveying parties, assisted by 10 draftsmen and 1 computer; also 2 stenographers and 1 blue-print boy. This force discharged the duties of preparing plans, memoirs, and estimates for the different projects of roads and bridges.

Field force.—At the beginning of the fiscal year, the field force in charge of the surveying work for new roads and bridges was stationed as follows:

Two parties were engaged in preliminary and location work in the Lares-Adjuntas Road: one in the section between the Blanco River and the place known as Vilellas Gap, 4 kilometers long, and the other from the Yahuecas River toward the place named "Bartolo." Both parties were under the charge of an assistant engineer who submitted to the central office in San Juan all field books containing sufficient data for the preparation of plans and projects.

One party was detailed to begin the final location of a section of 5 kilometers of the Juana Diaz-Ciales Road between the Maria Olaya Brook and the pass on the main divide. The grading of this section was done in part in the year 1908; for this reason no change of location of the line could be made, otherwise another route would have been followed in order to avoid a steep zigzag of 3 kilometers near the main divide.

Another party was detailed to begin the survey of the first 10 kilometers of the Loiza-Juncos Road.

One party was in charge of the Yauco-Lares Road, between kilometer 22 on the main divide and the Prieto River, a distance of 10 kilometers.

Another party was in charge of the location of 3½ kilometers of the San Sebastian-Las Marias Road, which survey was completed and the road is now under construction.

A brief description of the roads that have been surveyed is given below.

Lares-Adjuntas Road.—This road at the Lares end, follows the same location decided upon in the year 1907, as it was found to be the most economical after a thorough comparison with the project of another route which follows the right bank of the Blanco River, described in last year's report.

The estimated cost of the 3½ kilometers surveyed along the Blanco River up to Bernazar's plantation amounted to \$55,709, or an average of \$14,280 per kilometer, and the estimated cost of the project for the road decided upon and now under construction, between the Blanco River and Vilellas Gap, which is 4 kilometers in length, amounted to \$46,568, giving an average of \$11,642 per kilometer.

The surveying at the Adjuntas end begun at the bridge site on the Yahuecas River, 10 kilometers from Adjuntas and follows up the Limani River, climbing up to the divide between this river and the Guayo. From here it descends to cross the latter river, giving access to the richest coffee lands in the island. After crossing the Guayo River it rises again to pass the divide of the Guayo and Prieto Rivers, through the gap known as Polo, and from there it follows the line surveyed years ago up to the place known as Plan Bonito where the connection with the road coming from Yauco will be made.

Juana Diaz-Ciales Road.—The portion surveyed during the year was confined to the stretch of 5 kilometers of the section partially graded in the year 1908. The route followed being the same already decided upon which crosses through the gap in the main divide to the north side, whence it begins to descend to the Toro Negro River.

Loiza-Juncos Road.—Before selecting the route to be followed, a reconnaissance was made of the land to be served and two routes were found which are described as follows:

(1) One leading from Loiza follows a stretch of 6 kilometers of the Municipal Road known as Hato Puerco and climbs to a pass named "Ciego" on the divide of the Canovanillas and the Canovanillas Rivers. From this place it descends to cross the Canovanillas River and rises again to cross the divide between this river and the Gurabo River, following this watershed, and descending to enter the town of Juncos.

(2) The other route leads from the town of Loiza and follows the municipal road of Hato Puerco up to kilometer 7: then turns alongside the Canovanillas River up to kilometer 12, where it enters into the watershed of the Canovanillas River, following it for a distance of 3 kilometers. Then it ascends to cross the Gonzalez Gap on the divide of the Cubuy and Curabo Rivers.

The estimate for both routes will be carefully compared and the one that is the less expensive and offers better facilities will be chosen.

San Sebastian-Las Marias Road.—In compliance with an act approved in the year 1913 assigning \$20,000 for the construction of this road, a surveying party was in charge of taking field data of the project for the first 6 kilometers. As soon as the project was completed a construction party was detailed to proceed to the location of the first 3½ kilometers which are now under construction.

This road approaches the town of San Sebastian, and after crossing the Culebrinas River ascends to cross the divide between this river and the Sonador River. After crossing the latter it enters into the valley of the Guasio River, crosses it, and rises to the junction with Road No. 13, between Las Marias and Mayaguez.

PROJECTS FOR NEW ROADS AND BRIDGES

The following table shows the projects for roads and bridges prepared in the office during the fiscal year, giving the length of roads, span of bridges, and estimated cost:

	Length.	Estimated cost.
Roads:		
Yauco-Lares	5 kilometers.....	\$80,308.35
Lares-Adjuntas	4 kilometers.....	46,568.33
Adjuntas-Lares	5 kilometers.....	53,754.03
Corozal-Barros	4.5 kilometers.....	32,678.11
Ciales-Juana Diaz	6 kilometers.....	67,452.33
Mayaguez-Maricao	4.6 kilometers.....	31,963.50
Bridges:		
Aguacate Brook.....	10-meter span.....	7,651.38
Anon Brook.....	7-meter span.....	5,015.01
Hicotea Brook.....	6-meter span.....	2,500.00
Maricao River.....	20-meter span.....	6,918.90
Naranjo River.....	do.....	12,500.00
Achiote River.....	do.....	12,628.97
Mayaguez River.....	17-meter span.....	21,190.40
Cidra.....	30-meter span.....	11,611.18
Grande de Loiza River.....	90-meter span.....	17,776.12
Valenciano River.....	88-meter span.....	12,522.16
Guajataca River.....	7-meter span.....	1,979.40
Culebrinas River.....	14-meter span.....	1,201.44
Grande River (Adjuntas).....	48-meter span.....	29,369.40
Grande River (Arecibo).....	230-meter span.....	169,926.90

The project for four bridges, one over the Rio Grande of Arecibo and three over the watercourses near the town, was prepared in compliance with the law approved on February 21, 1918, which law appropriated the sum of \$5,000 for the survey and projects of said bridges and the road from Central Cambalache to the town of Arecibo.

The law provided that the commissioner of the interior should submit to the ninth legislative assembly of Porto Rico, a complete project and estimate for the bridges and road. As there were no funds available in the treasury, it was decided to proceed with the surveys and the completion of the project. The sum of \$1,879.77 was expended on this work and paid from the appropriation for the construction and maintenance of roads and bridges, fiscal year 1918-19. The estimated cost as detailed in the project amounted to \$169,926.90, but this project will not be carried out as the legislature did not appropriate sufficient funds for the purpose.

Other projects were nearly completed at the end of the fiscal year as follows: Comerio-Cidra Road, the first 3 kilometers; Corozal-Morovis Road, a project of 3 kilometers; Loiza-Juncos Road, for a length of 10 kilometers; La Muda-Guaynabo Road which has a length of 4 kilometers.

One of the most important projects prepared by the bureau of public works is the one for the construction of the San Antonio-Martin Pena Road, which is fully described in last year's report, where it was stated that no work was executed on this road owing to the fact that the amount appropriated in March, 1909, was too small compared with the total estimated cost of the road, as is demonstrated by the fact that one single item that of the right of way and indemnity to owners of houses, which must be moved out or demolished, was estimated at \$80,000.

As the legislature amended the law and appropriated sufficient funds for carrying out the work, as stated in another part of this report, we are now in condition to proceed with the construction of the road as soon as the money is available.

The length of this road is 4,200 meters, and will be not less than 15 meters wide, nor more than 20 meters. The location was made for a 20 meters roadway with exception of a stretch of 330 meters through the barrio of Miramar, where the width is to be 15 meters.

The total area of the right of way is 82,350 square meters, but it will be necessary to acquire a greater area corresponding to lots whose owners are not willing to sell a portion only. The area of 5,947 square meters obtained by purchase up to June 30, represent 7.2 per cent of the total area of the road and the cost of this land and the frame houses which are to be moved represent the sum of \$14,084.09.

The area offered by donation is \$20,545 square meters or 23.7 per cent of the total area needed.

The total expended up to June 30, 1919, is shown below:

Purchase of land and houses	\$14,064.09
Surveying expenses and deeds	3,420.15
Total	17,574.25
Expended in previous years	3,529.46
Total expended	21,103.71

Data on hand for new projects.—There is on hand sufficient data for the completion of different projects representing a total length of 54 kilometers of the roads which will be under construction during the next fiscal year, as soon as funds from the second \$1,000,000 bond issue are available. The above length will include 4 kilometers of the Lares-Adjuntas Road, from Vilellas Gap to the place known as "Llano de Pola"; 5 kilometers of the Ciales-Juana Diaz Road between the pass on the main divide to the crossing of the Toro Negro River; 21 kilometers of the Corozal-Barros Road, between kilometers 12 on the divide of the Corozal and Mata Canas Rivers, to the town of Barros; 5 kilometers of the Yauco-Lares Road between Indiera's plantation and the crossing of the Prieto River; 5 kilometers of the Maricao-Indiera Road from the town of Maricao to the bridge's site over the Guaba River; 4 kilometers of the Road La Muda to Guaynabo, from its junction with Road Rio Piedras-Caguas at kilometer 17 and the town of Guaynabo; 10 kilometers of the Loiza-Juncos Road from the town of Loiza.

RECOMMENDATIONS.

As it has been said elsewhere in this report, the roads and bridges to be constructed with the \$2,000,000 bond issue, will be only those numbered from 1 to 14 in the list approved by the economy commission, and with the amount of \$1,000,000 appropriated by the last legislature, which law is already mentioned in this report, we shall be able to construct only the roads included from Nos. 15 to 22 of the said list.

This being the case it is recommended that as soon as the second issue of \$1,000,000 is available the construction of the following roads and bridges be undertaken during the fiscal year 1919-20:

1. Lares-Adjuntas Road, section from Vilella's Gap to "Llano de Polo," 4 kilometers long.
2. Adjuntas-Lares Road, section from Yahuecas River to the Guayo River, 9 kilometers long.
3. Adjuntas-Lares Road, the bridge over the Blanco River, kilometer 12 from Lares.
4. Ciales-Juana Diaz Road, a section of 5 kilometers between Cialitos and Recodo.
5. Corozal-Barros Road, the section between kilometer 12 and the crossing of the "Mata Canas" River, with a length of about 4 kilometers.
6. Yauco-Lares Road, the section of 5 kilometers from the Indiera's plantation down to the Prieto River.
7. Vieques Road, section between the Arkadia and Puerto Real Sugar plantation.
8. The bridges over all water courses on the Humacao-Yabucoa Road.
9. The bridges on the Naguabo-Ceiba Road.
10. Maricao-Indiera Road, a section of 5 kilometers from the town of Maricao down to the Guaba River.
11. Naguabo-Juncos Road, the portion being surveyed between the town of Juncos and the place known as "Los Torres."
12. Corozal-Morovis Road, a section of 4 kilometers to complete the graded portion between the junction with the Corozal-Barros Road and the Carreras River.
13. Comerio-Cidra Road, a section of 3 kilometers from kilometers 3 to 6.
14. La Muda-Guaynabo Road, the total length of this road, 4 kilometers.
15. Loiza-Juncos Road, the section already surveyed of 10 kilometers leading from Loiza.

MAINTENANCE OF ROADS AND BRIDGES.

BRIEF HISTORICAL REVIEW.

The system of road maintenance in use during the time of the Spanish government was equal to the one employed at present, which is identical with that used in France, Spain, and in other European countries.

During the nine years which elapsed from 1905 to 1914 this system was abandoned, with results which were evidently disastrous to many sections of road which rapidly deteriorated.

Experience demonstrated the convenience and necessity of reestablishing the old Spanish system, which consists essentially in having the roads under the constant

attention of laborers who attend to the repairs of all small defects that may develop, or damages that may be caused to the road, promptly after they become noticeable. Under this system the road is looked after by camineros (road menders), each one in charge of about 3 kilometers of road, under the supervision of a foreman who takes care of some 18 to 24 kilometers, both foremen and road menders being under the inspection of an overseer who has charge of 100 kilometers of road more or less.

The advantage of this system, which differs very materially from the practice in vogue in various parts of the United States, of allowing sections of road to deteriorate to a certain extent and then make periodical repairs, using a gang of men, is quite evident, from the fact that all small damages caused by the elements and by traffic, are checked from the start by the road mender, who proceeds without delay to make necessary repairs. Thus the road mender takes care of cleaning out of all obstacles which may be formed by the accumulation of silt or debris from landslides, and also gives proper attention to the opening of drains to carry the water off the roadway; he maintains the surface of roads in a smooth condition by repairing all pits which may form before the pounding of traffic converts them into large size holes; and in general he looks after all small details which add to the proper preservation of a road. With the system of employing a gang of men to make repairs every now and then, these small defects pass unnoticed until they grow to such proportions that repairs must be made, the work being then more expensive, and the method an unsuitable one for traffic, since the roads can never be continuously maintained in good conditions.

In addition to all these advantages the road menders are available for other duties. They are charged with the inspection of traffic and they also exercise police powers to help obtain proper observance of the laws, rules, and regulations governing the public use of insular roads.

Further on under the heading of "Road maintenance of the fiscal year 1918-19" more detailed information is given of this system of maintenance.

We are giving below a table taken from volume No. II of the book entitled "Memorias de Obras Públicas" for the years 1885 to 1888, and also a table giving in detail the cost of road maintenance during the fiscal year 1887-88, and which also shows the cost of each one of the sections of road opened to public traffic in that year. Lack of data in our records corresponding to the years 1888-1898, which as herein previously explained, prevented us from giving an account of the construction of roads during these years, prevents us likewise from making reference to the work of road maintenance during that period:

Comparative statement of the length of roads opened to public use since the year 1871 and expenditures made on repairs and maintenance during the years 1871 to 1888, not including inspection expenses.

Fiscal year.	Length of roads under maintenance.	Length of roads opened to traffic during the year.	Permanent force employed on maintenance.		Main tenance cost during the year.	Cost of repairs during the year.	Total cost of main-tenance and repairs.	Average cost per kilometer of main-tenance and repairs.
			Fore-men.	Road mend-ers.				
	Kms.	Kms.			Pesos.	Pesos.	Pesos.	Pesos.
1871-72.....	48	.....	3	14	9,999.48	.....	9,999.48	208.32
1872-73.....	48	.....	3	15	9,999.87	.....	9,999.87	208.33
1873-74.....	48	.....	3	14	9,543.13	3,390.45	8,933.58	186.12
1874-75.....	48	.....	3	14	15,711.20	9,275.83	25,017.03	521.19
1875-76.....	65	17	1	14	18,488.48	6,511.47	24,999.95	384.01
1876-77.....	86	21	2	16	27,608.27	11,870.91	39,479.18	459.06
1877-78.....	96	.....	2	24	34,016.15	24,426.85	58,443.00	679.57
1878-79.....	86	.....	2	24	36,497.95	11,663.21	48,161.16	560.01
1879-80.....	105	19	4	31	45,281.87	4,701.44	49,983.31	476.03
1880-81.....	141	36	7	48	48,517.13	1,480.72	49,997.85	354.57
1881-82.....	144	3	7	48	46,821.80	3,175.74	49,997.54	347.20
1882-83.....	144	.....	7	48	44,144.82	5,854.96	49,999.78	347.22
1883-84.....	144	.....	7	48	51,287.20	8,712.64	50,000.84	415.97
1884-85.....	164	20	7	50	49,999.14	.....	49,999.14	304.84
1885-86.....	164	.....	7	50	.....	.....	50,000.84	305.85
1886-87.....	170	6	8	59	.....	.....	60,088.98	352.95
1887-88.....	176	6	9	61	.....	.....	71,495.01	403.12

Comparative statement of the cost of maintenance and repair of State roads during the fiscal year 1887-88.

Roads.	Number.	Length.	Permanent force employed in maintenance.		Expenses.			
			Foremen.	Road menders.	Salary of personnel.	Wages of laborers and convict labor.	Materials.	Total.
From San Juan to Ponce Playa:		<i>Kms.</i>			<i>Pesos.</i>	<i>Pesos.</i>	<i>Pesos.</i>	<i>Pesos.</i>
Section from San Juan to Caguas, 18 kilometers.....	1	18	1	6	2,448.00	5,083.39	10,158.83	17,690.22
Section from Caguas to Cayey.....	1	43	2	14	5,140.79	3,681.49	4,230.49	13,052.22
Section from Cayey to Ponce Playa.....	1	72	4	26	8,871.67	5,705.48	8,722.56	23,299.71
From San Juan to Mayaguez:								
Section Catano-Bridge Reyes Catolicos.....	2	20	1	7	2,398.98	1,677.37	2,556.55	6,632.90
Section between Rio Anasco and Mayaguez.....	2	9	.....	3	897.50	1,327.55	1,728.12	3,953.17
Section between Mayaguez and Puente Pezuela.....	3	14	1	5	1,832.14	2,077.90	2,591.28	6,501.41
General expenses, blank forms and stationery used by the road maintenance service.....							254.83	254.83
Total.....		176	9	61	21,589.08	19,553.27	30,342.66	71,485.01

Cost of road maintenance per kilometer, \$406.16. This statement is given for one year, in order that it may be compared with the statement submitted by the road maintenance service for the year 1919 and a comparison may be made with the present cost of maintenance per kilometer. The great number of subdivisions of expenditures used at present is noteworthy.

In speaking of road maintenance, the report of Gen. George W. Davis states that the budget of the Spanish Government for the repair and maintenance of roads, in the year 1898-99, amounted to \$300,000. Such an expense would amount, for the 254 kilometers of roads built, to an average cost of maintenance per kilometer of approximately \$1,200. This average cost appears rather high for that period, since it may be seen from the preceding table that the largest average cost of road maintenance during the period 1871-1888 took place in the year 1877-78, at a cost of only \$679.57 per kilometer. It has not been possible to determine in detail the cost of road maintenance from the year 1898 until the year 1902; the only data which have been found indicate that the budget for the year 1899-1900 amounted to \$158,000; for the year 1900-1901 to \$160,844; and for the year 1901-2 it amounted to \$271,400. It is not strange that no record should exist of the cost per kilometer of road maintenance during these years, since the disastrous cyclone of San Ciriaco, which swept over the island on August 8, 1899, destroyed a considerable portion of the roads and bridges, bringing about a complete disorganization of the service under the care of the "Junta de Obras Publicas."

The length of roads which have been under maintenance since the year 1902 to 1918, and also the total annual cost per kilometer under maintenance, are given in the following table:

Public works, road maintenance.

Fiscal year.	Kilometers under maintenance.	Annual appropriations.	Cost per kilometer.	Fiscal year.	Kilometers under maintenance.	Annual appropriations.	Cost per kilometer.
1902-3.....	445.1	\$176,780.00	\$397.00	1910-11.....	974.0	\$296,943.00	\$304.86
1903-4.....	518.2	193,740.00	374.00	1911-12.....	991.5	301,870.00	304.42
1904-5.....	662.0	193,021.00	292.00	1912-13.....	1,060.0	332,055.00	313.26
1905-6.....	680.0	137,200.00	201.50	1913-14.....	1,067.7	374,725.00	331.50
1906-7.....	790.0	206,571.00	261.50	1914-15.....	1,107.2	289,989.00	261.91
1907-8.....	813.0	216,367.00	303.00	1915-16.....	1,126.9	297,721.00	264.10
1908-9.....	900.6	298,852.00	331.81	1916-17.....	1,138.3	516,581.00	453.81
1909-10.....	971.6	278,152.00	286.49	1917-18.....	1,154.0	608,886.00	527.63

Average cost per kilometer:

1902-1916.....	\$301.92
1916-1918.....	490.76

The highest average cost per kilometer of road maintenance during the years 1871-1888 under the Spanish Government was \$679.57, and in the statement just referred to this cost only goes as high as \$527.63 for the year 1918. If we take into account the immense increase in the volume of traffic, which will be spoken of further on, and the rise in wages and in cost of transportation and materials, it appears that the present system is a very economical one. Nevertheless, the amount expended does not meet all requirements to maintain the roads in good condition all the year around, in other words, the expenditures on road maintenance are only limited by the appropriations made by the insular legislature, which always assigns an amount much below what is requested. Owing to this shortage in the funds, the department is unable to carry out each year the work actually required to properly maintain the roads. This inconvenience could be remedied with adequate appropriations each year. There are quite a large number of wooden bridges and culverts, most of them in very poor condition, which should at the earliest possible date be substituted by permanent structures, and there are besides a good number of roads where no bridges have been built over stream crossings, it being, therefore, necessary to gradually provide such structures; but this work cannot be carried out until our annual appropriations for road maintenance permits an expenditure of at least \$700 per kilometer, which for the 1,300 kilometers built to date, would amount to a total of \$910,000 per year.

With this amount better care could be taken of the maintenance of quite a number of municipal roads which have been lately transferred to the insular government, to be maintained as insular roads. The majority of these roads have very steep grades, are very poorly macadamized; they lack the necessary width, and are not provided with road structures; all this meaning a much heavier cost to maintain them.

The consolidation of the macadam on the roads built during the Spanish Government was done by means of road rollers drawn by oxen. The first steam roller, weighing 12 tons, was brought to this island in the year 1900-1901. There are at present 10 steam rollers and 17 gasoline rollers.

We are not in possession of sufficient data to show the great increase of traffic over the insular roads which has taken place in the last 20 years, but with simply looking at the value of our imports and exports, an idea can be formed of the extent of this increase. Below is given the value of imports and exports for several years.

1901.....	\$17,502,103.00	1915.....	\$83,841,203.00
1905.....	35,215,821.00	1918.....	143,383,314.00
1910.....	68,595,071.00		

Another indication of the development of traffic in this island is given by the increase in the number of automobiles licensed which has taken place since the year when automobiles began to be used here to any extent as a transportation vehicle.

In the year 1906 there were in Porto Rico 99 motor vehicles; in 1910 there were 309; in 1918 there were 4,529; and at present there are 4,769 motor vehicles.

Studying these data in connection with those which were taken in the years 1905, 1906, and 1910, to determine the average weight of traffic passing during 24 hours over the section of road between San Juan and Rio Piedras, another idea can be formed of the extent of this increase in traffic. In 1905 during 24 hours 1,400 gross tons passed over this section, including weight of vehicle and load. In 1906 during 24 hours 1,900 gross tons passed over this section, including weight of vehicle and load. In 1910 during 24 hours 2,286 gross tons passed over this section, including weight of vehicle and load. No observation of this kind has been made again since the year 1910, but if we fix our attention on the great increase in the number of motor vehicles, which runs from 306 in 1910 to 4,529 in 1918, and on the increase in the value of imports and exports during the same years, from \$68,595,074 in 1910 to \$143,383,314 in 1918, it must be admitted that our roads are carrying to-day traffic many times heavier than that carried in the year 1910.

In order that our roads may stand the destructive effect of motor trucks and automobiles, it has been necessary in the roads recently built to increase the thickness of the macadam, make an expensive selection of the material employed, and improve the method of construction. It has also been necessary to resort to a more frequent resurfacing of the macadam in the old roads. This heavy traffic, combined with the destructive effect of the rain waters, induced the administration to undertake the use of asphalt and bituminous materials to pave the sections of heaviest traffic.

The first tests with such pavement were made in the year 1909, using Tarvia and other bituminous materials. For the purpose of making the test, and to continue the use of this kind of pavement if it proved successful, a machine for transporting and distributing the asphalt was brought from England in the year 1908. The machine bought had a capacity of 1,000 gallons of asphalt. This machine cost \$4,500, and it was used in the construction of a new pavement in the municipal pier in the year 1909 and in

the construction of a new pavement in the stretch of road from San Juan to Martin Peña during the years 1910 and 1911.

In the year 1911 Tarvia was substituted by asphalt, and this is the material which is now used with success, especially in the section of road between San Juan and Caguas. The average cost of this pavement, including all materials and doing the work with convict labor, amounted in 1911 to 20 cents per square meter.

During the year 1918, \$9,855 were expended in the purchase and placing of asphalt. The average cost per square meter of road covered with asphalt amounted to 20.7 cents, including materials and labor.

MAINTENANCE AND REPAIRS OF ROADS AND BRIDGES FISCAL YEAR 1918-19.

ORGANIZATION AND METHODS EMPLOYED.

To handle the work of road maintenance and repairs, which is of the utmost importance and constitutes one of the main duties assigned to the bureau of public works, and by far one of the biggest items of work in care of the department of the interior, a division was established a few years ago under the direction of the superintendent of public works and placed in charge of a maintenance engineer and an inspector general of maintenance.

A diagram showing the organization taking care of this work is attached herewith.

Methods of maintenance used in Porto Rico.—A word or two should be said in this report about the method of maintenance used in this island.

The methods of road maintenance adopted in different countries of the world, are grouped into two kinds, the "continuous method" and the "periodical method."

In the periodical method of maintenance repairs are made when the conditions of the road are such that the reconstruction of the pavement or of any part of the road is required. No permanent personnel is employed to repair the small failures as they occur, but instead a gang of men under the direction of a foreman is employed to carry out this work of reconstruction.

In the method of continuous maintenance a permanent force is employed, consisting of foremen and road menders, who not only are charged with the duties of repairing all small failures occurring in the pavement, road shoulders, and side ditches, but also attend to the general cleaning of the road and to slight repairs of the road structures.

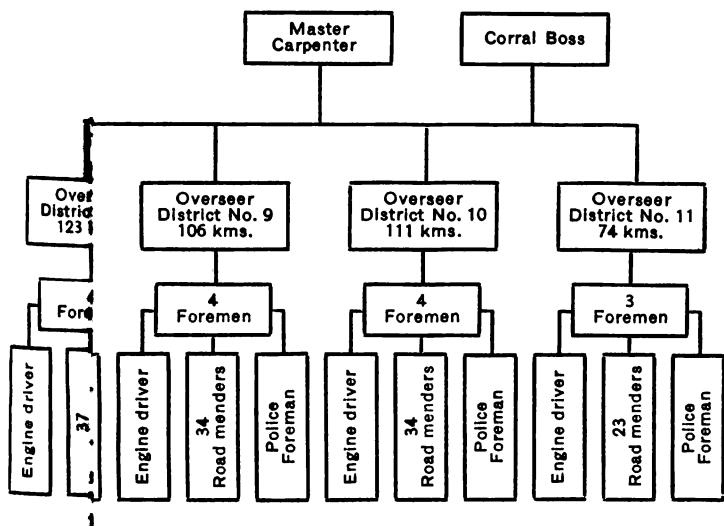
Both methods have their advocates, the continuous method being widely used in European countries, while the periodical system is in use in the United States, where the former, however, is rapidly gaining in favor.

The climatic conditions of our country, the exuberant vegetation of our soil, long rainy seasons, and the shortage of laborers in some parts of the island are factors which combine to show the necessity of adopting the continuous method of maintenance to attain best results. No doubt these were the reasons which led the Spanish Government to establish this method, and for which they properly provided when the roads were being built by furnishing road houses for the residences of the personnel which later was to take care of the maintenance and police of the roads.

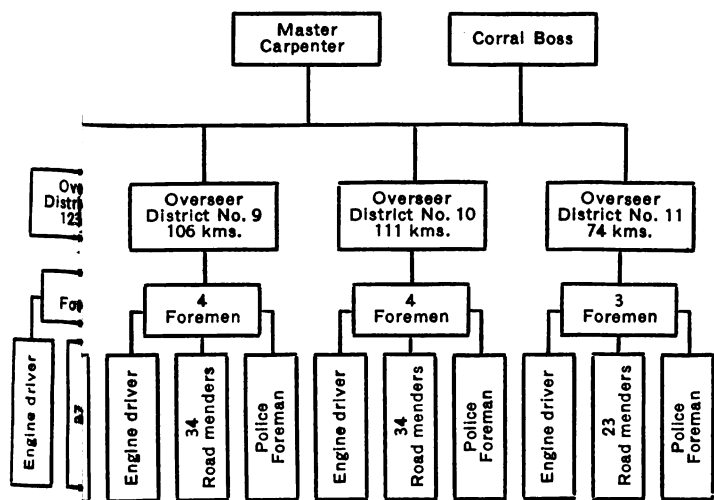
As already mentioned in the preceding historical review, the continuous method of maintenance was used in this island during the time of the Spanish Government and also after the American occupation up to the year 1905. That year the method was discontinued, either for reasons of economy or because those then in charge of public works were not in favor of the system, and the periodical method of maintenance was followed up to the year 1914, when in view of the poor results obtained with this latter system and having more money available for maintenance it was decided to again reestablish the method of continuous maintenance.

Thus within the short time that this method has been put once more in practice it has not been possible yet to obtain and keep a body of skilled laborers, and thus we find ourselves yet in the process of training the personnel, it being our aim to succeed in getting together a body of men well acquainted with the work under their care and who can fully realize the responsibility as well as the dignity inherent to the position they fill as a public officer.

The road menders, locally known as "camineros," take care of the general cleaning of the road, keep all side ditches and drains clean, take care of properly grading the shoulders of the road, look after light repairs of road structures, pay the necessary attention to promote the growth of shade trees along the sides of the roads, take preferential care of properly repairing small failures of the pavement, filling holes and ruts, and also discharge police duties to secure the observance of the laws, rules, and regulations governing the use of public roads.



—
I
I



An idea can be formed of the importance of this method of maintenance in Porto Rico by merely mentioning the length of side ditches and the area of road shoulders, and also that of the roadway in the insular roads to-day, all of which require a constant attention to keep the roads in good régime.

These figures are: 1,800,000 linear meters of side ditches; 2,400,000 square meters of shoulders; 7,200,000 square meters of macadamized surface.

For the proper discharge of the police duties assigned to the "camíneros" they are required to patrol their section daily. They are also required to make daily inspection of the road structures, examine the damages caused by traffic and by rains, and to report before the municipal courts all cases of violation of the law in regard to the road. For this purpose a set of rules and regulations were drawn out and put in force in March, 1918.

Appropriation for the maintenance and repairs of roads and bridges during the fiscal year 1918-19, and work accomplished.—The appropriation made by the legislature in the annual budget for the maintenance and repairs of roads and bridges during the year 1918-19 amounted to \$625,000. And to carry out the provisions of act No. 49 approved December 1, 1917, which directs the commissioner of the interior to maintain the section of insular roads running through the urban zones of the towns, an amount of \$25,000 was added to the maintenance appropriation. Thus, a total of \$650,000 was assigned for all work of the year in connection with the maintenance of insular roads and bridges.

This amount was expended as follows:

Purchase of 115,423 cubic meters of crushed stone for the reconstruction and repair of the macadam.....	\$196,584.82
Placing of 126,986 cubic meters of stone for general resurfacing and filling holes and ruts.....	96,366.54
Renewal of top binder and other light repairs to the pavement.....	463.57
Auxiliary help to the road menders in clearing ditches, grading, and cleaning shoulders.....	2,382.86
Removal of landslides.....	5,692.61
Salary of road menders.....	102,297.11
Purchase and repairs of machinery and tools.....	37,146.21
Construction of new bridges by contract.....	43,120.72
Rebuilding of bridges and culverts by force account.....	39,259.35
Protection and retaining walls.....	2,506.76
Repairs to road houses.....	4,173.42
Purchase and spreading of asphalt.....	22,971.95
Raising of grades and improving of alignment in certain roads.....	6,104.31
Inspection expenses, including salaries of inspector general, overseers, foremen, traveling expenses and per diems.....	72,127.38
Salaries of office force.....	11,104.92
Care of mules and repairing of wagons.....	4,003.52
General expenses.....	2,269.03
Total expended up to June 30, 1919.....	647,575.07

This total represents the amount expended and paid up to the date when the books were closed, on account of services rendered and materials purchased during the fiscal year. The balance remaining of this appropriation, which amounts to \$2,424.93, corresponds to outstanding liabilities among which is included the contract for repairs to the bridge over river "Culebrinas" on the San Sebastián-Las Marías road, and other small bills which have not yet been rendered by the bureau of supplies, printing, and transportation.

WORK DONE DURING THE YEAR.

Purchase and placing of stone in macadam.—The roads built and under maintenance up to June 30, 1919, aggregate a total length of 1,202 kilometers. According to the information rendered by the overseers in answer to conservative instructions sent by the central office, 438 kilometers out of this total length needed entire resurfacing.

For repairing the 1,202 kilometers, the overseers requisitioned 166,280 cubic meters of crushed stone, which at the prevailing average price of \$2.18 per cubic meter represents a total value of \$363,231.55. The quantity of stone purchased, however, was cut down to 125,000 cubic meters, as the funds assigned for the maintenance of roads and bridges during the year were not sufficient to take care of all the work planned to be carried out and at the same time to cover the extraordinary expenditures that had to be made in repairing the structures which were damaged by the earthquake of October 11, 1918.

The opening of bids for the furnishing of all the broken stone to be used during the fiscal year beginning June 30, 1918, was fixed for April 18, 1918, and widely advertised. Bids were called this early in order to give an opportunity to contractors to make an early delivery and thus obtain lower prices than those paid in previous years, when the delays incurred in contracting for the stone, necessarily made its time of delivery coincide with the sugar-cane crop.

Contracts were awarded for the furnishing of 54,200 cubic meters of crushed stone as compared to 33,612 cubic meters which was the amount contracted for the previous year. The amount contracted for, therefore, represents 46 per cent of the total amount purchased during the year, which amounted to 115,423 cubic meters. The difference of 61,223 cubic meters was acquired by administration using free and convict labor and also from small contractors through small direct purchase orders not exceeding \$300 in value.

The 54,200 cubic meters purchased by contract cost \$109,941.57, that is, an average price of \$2.03 per cubic meter. The 61,223 cubic meters obtained by administration cost \$86,643.25 or at an average cost of \$1.41 per cubic meter, and the total amount of 115,423 cubic meters purchased, cost \$196,584.82 which represents an average cost of \$1.703 per cubic meter.

This average price of \$1.41 per cubic meter of the stone obtained by administration, does not include the cost of inspection, nor that chargeable to depreciation of tools, etc., but estimating the latter expenses to amount to \$0.15 per cubic meter, the average cost of the stone obtained, figures out to amount to \$1.56 per cubic meter. The low cost of this stone is explained by the fact that a good amount of it was obtained using convict labor and also to the fact that its hauling from the quarry to the points of distribution along the road was largely done with the mules and wagons belonging to public works. The gradual increase which takes place every year in the price of broken stone, is worthy of note. It is due to the constantly rising wages and to the growing cost of transportation. This latter item constitutes a problem which must soon be solved using motor trucks. A few years ago the hiring of oxcarts to haul stone only cost from \$2 to \$2.50 per day, while to-day this cost has risen to from \$4 to \$6 per day, and in certain localities of the island it is practically impossible to get oxcarts for hauling stone.

The bureau of public works is also planning to buy a number of small portable stone crushers for the work of road maintenance, with the object in view of cutting down the present price of broken stone.

At the beginning of the fiscal year there were on hand left over from the previous year¹ 41,084 cubic meters of broken stone, which, added to the 115,423 cubic meters purchased during the year, make a total amount of 146,507 cubic meters. This was the quantity available for making repairs during the year 1918-19. Out of this total, 126,986 cubic meters were placed in macadam, thus beating the previous year's record by 28,455 cubic meters. This was the fiscal year in which the largest quantity of stone has so far been placed in repairing the public roads of the island. The balance remaining on hand on June 30, 1919, amounts to 29,520 cubic meters. It is estimated that about 5,000 cubic meters of this amount correspond to the small piles of stone which are left at convenient intervals along the places newly resurfaced for the light repairs subsequently made by road menders.

The average cost of placing stone amounted this year to \$0.75 per cubic meter, which is \$0.02 lower than that obtained for the previous year, in spite of the higher wages paid. The chief reason assigned for the lower average cost obtained this year is found in the fact that the work of placing stone was commenced quite early in the fiscal year, thus taking advantage of the rainy season, which makes easier the work of scarifying the old surface and greatly helps in the consolidation of the new one. The total length of road entirely resurfaced during the year was 300 kilometers, which is 22 per cent of the total length under maintenance, and 198,000 square meters of surface where holes and ruts which had formed were repaired. In these two classes of repairs an average quantity of 105.62 cubic meters of stone was used per kilometer, this representing the largest average per kilometer of such work since the year 1902. Adding the average cost of broken stone, which was \$1.70, as already stated, to the average cost of placing it in macadam, which is \$0.75, we obtain the amount of \$2.45 as the average total cost per cubic meter of stone placed during the year. This average cost can still be reduced in the future, making a more general use of scarifiers for removing the old surface previous to the placing of the new macadam.

Renewal of top binder.—Under this heading is included all the small repairs made by helpers to the road menders filling up the depressions and ruts produced by the traffic and spreading new binder over the rough surfaces generally formed on steep grades where the binder was rapidly washed down by the rain waters.

Reconstruction and cleaning of side ditches and side shoulders.—Under this heading are included the expenditures of \$1,355.73 made in the opening of new side ditches and drains. This work was done by gangs of men under the direction of a foreman. These gangs were also employed in some sections of roads, in the work of weeding the should-

¹ In last year's report a mistake was made in stating this quantity, which was given as 40,551.50 cubic meters. The quantity on hand in the Catano-Guaynabo Road was inadvertently omitted.

ders and side ditches, and also in the grading of shoulders in those sections where vegetation grows so rapidly that the road menders can not do all the work alone.

Removal of landslides.—The work of removing the landslides and the cleaning of all obstructions formed in the side ditches comes under the duty of the road menders, but owing to the heavy, rainy weather which prevailed during the months of May and June and which produced frequent landslides there was required the use of auxiliary gangs to help the road menders remove the large quantities of debris which accumulated, blocking the ditches and other drainage channels. This accumulation had to be immediately cleaned out to prevent damages being caused to the macadam and their side shoulders by the rain waters. The work of removing these landslides cost \$5,692.61.

Purchase and repairs of machinery and tools.—At the beginning of this year only 25 motor road rollers were available, some of which had to undergo important repairs. The bureau also owned 3 stone-crushing plants, 1 portable crusher, and 12 sprinkling wagons. During the year this equipment was increased with the purchase of two new road rollers provided with scarifying attachments. The cost of these two rollers with accessories amounted to \$11,270.54, which, by the way, is an excessively high price as compared to the prices paid for the other rollers which were bought in previous years. One of the main reasons for this high price is assigned to the excessive freight rates which were charged between this island and New York.

There were also purchased six new sprinkling wagons, for which the sum of \$4,094.78 was paid, and \$37,146.21 were expended in the repairing of rollers, purchase of repair parts for same, purchase of tools, general expenses in the shops, wages of skilled laborers, repairs of other machinery, automobiles, and motor cycles, and transportation of rollers over the railroad between distant points of the island. These expenditures are all detailed in the following statement:

Distribution of expenditures under this item.

Purchase of accessory parts for gasoline rollers.....	\$1,420.15
Purchase of repair parts for steam rollers.....	3,639.32
Purchase of tools used in rollers and stone crushers.....	2,100.94
Repairs to roller No. 19.....	25.68
Repairs to roller No. 4.....	93.13
Repairs to roller No. 9.....	1,149.98
Repairs to roller No. 12.....	365.30
Repairs to roller No. 25.....	778.54
Repairs to roller No. 5.....	482.90
Repairs to roller No. 2.....	156.96
Repairs to roller No. 14.....	52.60
Light repairs to several rollers.....	175.61
Total.....	10,441.01
Purchase of 2 new rollers, Nos. 28 and 29, with scarifying attachments.....	11,270.54
Purchase of 10 kerosene burners for use in the gasoline rollers.....	226.87
Purchase of 6 sprinkling wagons and their equipment.....	4,094.77
Purchase of new tools.....	2,046.87
Care and transportation of tools and machinery.....	3,315.74
Salary of storekeeper and shipping clerk.....	1,400.00
Salaries of engine drivers.....	1,632.67
Grand total.....	37,146.21

CONSTRUCTION, RECONSTRUCTION, AND REPAIRS OF BRIDGES AND CULVERTS.

Before discussing the work accomplished under this item, it is well to note here that there are in the insular roads a total of 3,642 structures, of which 416 are built of wood; 931 are of brick construction; 282 of various classes of masonry; 636 are of concrete; 86 steel spans; and 1,291 concrete pipes. Of this total number 781 are in such deteriorated conditions that they need entire reconstruction.

To rebuild these structures it is estimated that the amount of \$427,000 is required. Adding to this the estimated cost of the large number of bridges which are still lacking over streams which cross the insular roads and now have to be forded, which amounts to \$500,000, it is found that a total appropriation of \$927,000 is needed to provide the insular roads with all necessary structures of safe and permanent construction.

During the fiscal year just ended, the sum expended in the construction and reconstruction of road structures amounted to \$82,380.07. This work has been carried out by contract or by administration, as shown in the following account:

Structures built by contract.

Bridge known as Hicotea, a bridge of 6 meters spans, built over quebrada Hicotea, at kilometer 7.6, on the Vega Baja-Morovis Road, at a cost of.....	\$2,782.23
Bridge over Río Valenciano, at kilometer 15 of Road No. 5, Caguas-Humacao; cost.....	18,004.39
Bridge over Río San Lorenzo, at kilometer 11 of Road No. 7, Caguas-Las Piedras; cost.....	13,718.27
Bridge of 20 meters span over quebrada Achilote, on Road No. 11, Juana Díaz, Villalba section; cost.....	8,615.68
Total expended on new constructions.....	43,120.77

Structures reconstructed by administration.

Bairoa Bridge, on the San Juan-Caguas Road, kilometer 33.5. This bridge was originally built under the Spanish Government, with masonry substructures and wooden floor. The floor has been reconstructed of reinforced concrete at a cost of.....	1,134.05
Bridge over Quesbrada Los Frailes, at kilometer 9 of the Catano-Guaynabo Road. This bridge was built in 1914, with concrete abutments founded on concrete piles, and a wooden floor resting on steel I-beams. The floor was now reconstructed with reinforced concrete, at a total cost of.....	735.81
Lolza Bridge, on the Canóvanas-Lolza Road. This was a wooden bridge, and it was reconstructed with the same material, at a cost of.....	1,295.24
Culvert over quebrada Ceiba, of 7 meters spans. A reinforced concrete slab was constructed in place of the old wooden floor, at a total cost of.....	1,010.23
Mata de Plátanos Bridge, on the Manatí-Clares Road. This is a bridge consisting of one single steel span 80 meters long. General repairs were made to this bridge, especially the changing of rivets, a good number of which had rusted badly and were not safe. Also the whole bridge was painted. These repairs were begun during the month of May, and up to June 30 there had been expended the amount of.....	2,480.90
Emajagua Bridge, on the road between Mayaguez and the reform school. This is a wooden structure which was partly destroyed by the earthquake of Oct. 11, 1918. It was rebuilt during the year, at a total cost of.....	506.56
Bridge over Caño Corazón, on the same road, Mayaguez-Reform School, the earthquake of Oct. 11 caused such damages to this bridge that its reconstruction became necessary. The amount expended on this bridge was.....	1,323.50
Bridge known as Aguas Negras, on the Mameyes-Luquillo section of Road No. 3. This was a wooden bridge built many years ago, but it had already become so deteriorated that it was decided to reconstruct it this year, building it of reinforced concrete, at a total cost of.....	1,354.61
Bridge over Caño San Fernando, at kilometer 1 of the Catano-Guaynabo Road. This was an old wooden bridge, built by the municipality of Bayamón in the year 1904, but it had deteriorated to a dangerous condition. Its reconstruction was carried out, using reinforced concrete piles and beams, with a wooden floor. The amount expended in this reconstruction amounted to.....	3,460.12
Bridge over Bayamón River, at kilometer 7 of the Catano-Bayamón Road. This is a wrought-iron arch with masonry abutments, built during the Spanish régime. The effects of age and of heavy traffic of the railroad passing over this bridge had caused considerable deteriorations in the east abutment and the conditions were aggravated by the earthquake of last October, which rendered it in dangerous conditions. This abutment had to be reinforced, using concrete, and also the bridge was painted and general repairs were made, at a total cost of.....	6,102.08
Culvert at kilometer 6 of the Aguadilla-Aguada Road. This culvert was rebuilt at a total cost of.....	539.47
Expenditures made in the reconstruction of other structures and in the repairs of floors in wooden culverts, and in the construction of small box culverts built of reinforced concrete, amounted to.....	15,941.06
In the painting of 10 steel bridges was expended the amount of.....	2,626.24
Total amount expended in reconstruction and repairs of road structures.....	39,259.35

In the following list, a detailed account is given of the steel bridges which were painted during the year, giving the surface painted in square meters, and the cost of the work.

Bridges.	Square meters.	Cost.	Bridges.	Square meters.	Cost.
Juan Martí.....	200	\$497.76	Coamo.....	1,400	\$187.00
Damas.....	1,800		Reyes Católicos.....	3,200	414.48
Carolina.....	3,200	527.78	Guajataca.....	700	209.27
Pezuela.....	400	156.90	Río Grande.....	730	334.23
Camuy.....	260	194.25			
Usabón.....	260	104.57	Total.....	12,150	2,626.24

Protection and retaining walls.—The expenditures made during the year in this class of work although relatively small deserve special mention, since such work is carried out for the exclusive purpose of affording proper protection to traffic, especially on the mountain roads. In the construction of protection walls, the amount of \$2,506.76 was expended.

A river protection wall was built this last year on the banks of the Salinas River, at kilometer 167 of the Salinas-Santa Isabel Road, just outside of the town of Salinas. The object of this wall is to prevent the further action of the river against its banks. This action had gone so far as to threaten the destruction of the road, which at this point follows a location quite close to the river.

Protection walls were also built on Roads Nos. 1, 2, 5, 14, and 15, these works serving the double object of giving protection to traffic and also to prevent the development of landslides.

The further construction of this kind of protection works is indeed very necessary, especially on those roads built some 20 years ago, where grades are very steep, and curves of 10 to 12 meters radius are frequent, these two features combining to make traffic, especially automobile traffic, very dangerous.

Road houses (camineros' houses).—The department owns 47 road houses which were built during the Spanish government on the San Juan-Ponce, Afiasco-Mayaguez, Cayey-Guayama, Ponce-Adjuntas and Bayamón-Toa Alta Roads. These road houses which are located about 6 kilometers apart, are not only assigned as living quarters to road menders and foreman, but most of them are also used for the storing of tools and materials.

The majority of these buildings are built of combined brick and stone masonry and special mention should be made of those which were built on the Ponce-Adjuntas, Cayey-Guayama, and Afiasco-San Germán Roads for their pleasing architectural style.

The amount expended during the year in repairing these houses was \$4,173.42. Those located at kilometers 28.9, 79.5 and 132.3 of the San Juan-Ponce Road were reconstructed and small repairs were made on those located at kilometers 7.5, 9.5, 19.1 and 72.9 of the same road, and in that located at kilometer 2.8 of the road between Ric Piedras and Carolina. The houses located at kilometer 14.8 of the Cayey-Guayama Road, and the one located at kilometer 182.8 of Road No. 2, Mayaguez-Afiasco section were reconstructed. This latter had been destroyed by the earthquake.

Purchase and spreading of asphalt.—At the beginning of the fiscal year the quantity of asphalt on hand for the maintenance of roads was 15,535 gallons. During the year 35,518 gallons were purchased, being thus available 51,053 gallons for the maintenance work during the year. The total quantity placed on the roads was 50,804 gallons.

The price of this material has risen from \$0.075 a gallon in the year 1906 to \$0.29 a gallon during the year just ended. This rise in price is due not only to the high cost prevailing in the States on account of the war but chiefly to the high rates charged for freight between this island and New York.

The expenditures made in the purchase and spreading of this material during the year, amounted to \$14,985, distributed as follows:

33,370 gallons asphalt at \$0.29 a gallon	\$9,657.00
1,333 cubic meters of $\frac{1}{2}$ -inch stone for carpet coating at \$2.75 per cubic meter	3,663.00
Spreading of material at \$0.05 per gallon	1,665.00
Total	14,985.00

This expenditure was made on the portions paved with asphalt, from kilometer 18.3 to kilometer 25.6 of the San Juan-Caguas Road; road between Ponce and Ponce Playa, which extends from kilometer 131 to 134 of the Military Road, and the portion of Road No. 1 running through the town of Caguas. The total length of road surfaced with asphalt this year was 11.1 kilometers.

Thus, an average expenditure of \$1,340 was made per kilometer of road surfaced with asphalt which represents an average cost of \$0.27 per square meter.

In the maintenance of the first 18.3 kilometers leading out of San Juan on the San Juan-Caguas Road, there was expended the amount of \$5,691.38, as follows:

2,218 gallons of asphalt at \$0.29 per gallon	\$643.22
15,535 gallons of asphalt purchased during the year at \$0.19 $\frac{1}{2}$ per gallon	3,068.16
720 cubic meters of $\frac{1}{2}$ -inch crushed stone at \$2.75 per cubic meter	1,980.00
Total	5,691.38

The average cost of maintaining the section of this road, surfaced with asphalt, amounted to \$311 per kilometer. This work has been done by the road menders alone, this being the reason for not including the cost of spreading the material in the above detailed account.

In the general table showing the expenditures made in the maintenance of roads and bridges during the fiscal year ending June 30, 1919, a total of \$22,971.95 is given under the item for purchase and spreading of asphalt. A difference of \$5,363.73 appears between the expenditures as given in that table and the figures previously mentioned. This difference was expended in the quarrying of stone in the Fair Grounds, Puerta de Tierra, and the repairing of mule carts belonging to public works, which were used for the hauling of asphalt and crushed stone for surfacing the San Juan-Caguas section, its cost being therefore chargeable under this item. However, this stone was not used during the year and its value was deducted for the purpose

of figuring the average cost of maintenance and also to determine the exact cost per square meter of area covered with asphalt.

Raising of grades and changes of alignments in the various roads.—The expenditures incurred during the year in work of this nature amounted to \$6,104.31, distributed on the following roads:

Road No. 2, Santurce-Bayamón section. The fill serving as approach to the bridge over the Martín Peña channel was raised to prevent its being flooded by the high tides. An amount of \$5 514.96 was expended on this work.

An amount of \$599.35 was expended in widening certain portions of roads, with the purpose of flattening the curves and thus better the alignment at those places which are dangerous for traffic.

The roadway of the Canovanas-Loiza Road had to be widened and also the grade of the stretch built next to the Río Grande de Loiza on the same road had to be raised.

Inspection expenses.—Under this heading are included the salary paid to the inspector general of maintenance; salaries of the road overseers, assistant overseers, and foremen; the traveling expenses and per diems of the supervising personnel, and the traveling expenses and per diems of the paymaster. The amount thus expended during the year was \$72,127.38, distributed as follows:

Salaries of the inspector general and overseers	\$22,656.83
Salaries of the foremen	21,229.58
Traveling expenses and per diems	28,240.97
Total.....	72,127.38

The average cost of inspection, including also the inspection done by the road menders, amounted this year to \$60 per kilometer.

General expenses.—Under the item of general expenses is included the following:

Salaries of the office force.....	\$11,104.92
General office expenses, including telegrams, telephones, post-office box rent, and water for the road menders' houses.....	2,269.03
Care of mules and repair of carts.....	4,003.52
Total.....	17,377.47

RECOMMENDATIONS.

I can not help insisting on our recommendations of previous years, that the largest possible annual appropriation be made for the maintenance of roads and bridges. Funds are needed very badly to be applied to:

1. The purchase of the necessary quantity of broken stone to properly repair the roads of the island. Our records show that the wearing surface of our roads does not last over 3 years as an average, and this means that 400 kilometers of insular roads must be resurfaced every year. For this purpose 160,000 cubic meters of broken stone are required. In order to reconstruct the pavement of the 387 kilometers of municipal roads which have lately been transferred to the insular government, 232,200 cubic meters are needed. Therefore, the total quantity of broken stone actually required for next year amounts to 392,200 cubic meters, which at the average price of \$2.70, the cost of purchasing and placing in the macadam, represents a total expenditure of \$1,058,940.

2. To increase the number of road menders to 405 for the coming year.

3. To provide our repair and machine shop with additional machinery which is sorely needed.

4. To build the number of bridges now lacking to eliminate the fording of streams on our roads, and to replace with safe and permanent structures those now in existence which are in bad condition.

5. To build proper guard parapets along those sections of roads which are dangerous for traffic.

6. To gradually extend the use of asphalt surfacing on our roads.

7. To raise the grades of portions of roads now subject to flood.

8. To increase the salary of personnel and wages of laborers, bringing them up to the level set by private industries.

9. It is also recommended, as a means to increase the appropriation for maintenance, that the money collected for automobile licenses be set aside to make up a special fund for the reconstruction of roads and structures.

10. Summing up, it is recommended that a yearly appropriation be made of not less than \$1,000,000, to gradually meet the needs mentioned in the above items. This is the amount which is considered adequate to maintain our roads in first-class condition.

To supply a much felt need of skilled personnel, both for private and public works, I deem it a fitting recommendation to suggest that the University of Porto Rico, as well as the College of Agriculture and Mechanical Arts of Mayaguez, and the high schools of the island, include in their program of study special courses to enable men to receive adequate training and acquire the necessary knowledge to qualify them as expert overseers, inspectors, and mechanics.

MUNICIPAL ROADS.

BRIEF HISTORY.

In the year 1821, a French architect, by name of Chevrement, was placed in charge of the work of developing municipal roads through the interior of the island, having in view the conversion of these roads into insular highways at some future time.

No special funds were available for the building of these roads, and their construction was carried out by means of private subscriptions in each municipality. Afterwards there was a tax levied on "rum," the proceeds of which were assigned to the building of municipal roads, and also a portion of the customhouse revenues was contributed for this purpose.

By a royal decree of September, 1896, a credit of \$100,000 was granted to aid the building of municipal roads and to undertake the construction and repair of bridges on provincial highways. From this sum the amount of \$50,000 was assigned for the construction of municipal roads.

No information is available as to what roads were built with this allotment, nor how much of it was spent. About the only thing that can be gathered from recent data at hand is that up to the year 1898 there had been constructed about 2,938 kilometers of roads, the great majority of which were dirt roads of very narrow width.

Under the American régime the system of municipal road construction was changed. The island was divided into seven districts (San Juan, Ponce, Mayaguez, Humacao, Arecibo, and Aguadilla), designated as "municipal road districts of Porto Rico," and in each district there was established a "board of road supervisors."

These boards had charge of the surveying, projecting, construction, and maintenance of all municipal roads, the cost of this work being paid from the proceeds obtained from 8 per cent of the property tax collected by the treasurer of Porto Rico.

This system did not produce the good results expected from it on account of the lack of a definite plan to be followed. On March 8, 1906, the legislature passed the municipal law now in force, which abolished the "municipal road districts of Porto Rico," and transferred to the municipalities, to be exercised by the municipal councils, all the rights, powers, and duties previously vested in and incumbent upon said road districts.

This law also specifies that, with the exception of the municipalities of class 1, no construction or repair work shall be performed without the technical direction and the immediate inspection of the department of the interior, for which services the department of the interior shall not make any charge to the municipalities.

Section 66 provided that all the roads of the island shall be known as municipal roads, excepting those roads maintained by the insular government. The law also provides that the municipal councils must record as municipal roads, in the office of the commissioner of the interior, all highways which have become such by usage, dedication, abandonment to the public, or by any other means provided by law.

The registering is effected through a petition in the form of an ordinance passed by the councils for this purpose.

In compliance with this law, all the towns of the island excepting Arecibo have recorded in the office of the commissioner of the interior up to the year 1919, a total of 1,314 roads, with an approximate aggregate length of 7,024 kilometers, as shown in the following table:

Registered municipal roads.

Municipality.	Number of roads.	Length.			Municipality.	Number of roads.	Length.		
		Paved.	Not paved.	Total.			Paved.	Not paved.	Total.
		Kilo-meters.	Kilo-meters.	Kilo-meters.			Kilo-meters.	Kilo-meters.	Kilo-meters.
Adjuntas.....	34	.....	251	251	Las Marias.....	35	.....	141	141
Aguada.....	11	6	27	33	Las Piedras.....	6	.....	80	80
Aguadilla.....	16	3	61	64	Loiza.....	20	12	81	93
Agua Buenas.....	17	.....	75	75	Manati.....	24	2	135	137
Aibonito.....	10	2	64	66	Maricao.....	11	.....	78	78
Añasco.....	57	3	209	212	Maunabo.....	11	.....	62	62
Arroyo.....	12	5	27	32	Mayaguez.....	40	.....	159	159
Barceloneta.....	20	15	87	102	Moca.....	16	3	129	132
Barranquitas.....	7	.....	81	81	Morovis.....	7	.....	60	60
Barros.....	10	.....	188	188	Naguabo.....	9	.....	25	25
Bayamon.....	29	16	77	93	Naranjito.....	14	.....	54	54
Cabo Rojo.....	23	14	120	134	Patillas.....	13	20	32	102
Caguas.....	15	12	54	66	Peñuelas.....	16	.....	96	96
Camuy.....	33	4	148	152	Ponce.....	14	.....	118	118
Carolina.....	15	18	50	68	Quebradillas.....	17	1	65	66
Cayey.....	18	.....	144	144	Rincon.....	22	.....	60	60
Ceiba.....	12	.....	44	44	Rio Grande.....	14	.....	71	71
Ciales.....	12	.....	171	171	Rio Piedras.....	18	12	59	71
Cidra.....	8	.....	58	58	Sabana Grande.....	10	.....	68	68
Coamo.....	57	5	277	282	Salinas.....	10	8	66	74
Comerio.....	16	.....	87	87	San German.....	24	.....	140	140
Corozal.....	13	.....	119	119	San Juan.....	1	4	.....	4
Dorado.....	7	4	26	30	San Lorenzo.....	6	.....	30	30
Fajardo.....	36	20	68	88	San Sebastian.....	45	2	165	167
Guanica.....	12	10	82	92	Santa Isabel.....	15	5	18	23
Guayama.....	13	25	39	64	Toa Alta.....	20	12	103	115
Guayanilla.....	12	10	98	108	Toa Baja.....	10	6	54	60
Guaynabo.....	13	.....	36	36	Trujillo Alto.....	19	2	62	64
Gurabo.....	10	.....	45	45	Utua.....	19	.....	153	153
Hatillo.....	18	5	87	92	Vega Alta.....	7	3	30	33
Hormigueros.....	22	11	33	44	Vega Baja.....	23	12	94	106
Humacao.....	18	8	177	185	Vieques.....	5	5	70	75
Isabela.....	8	2	79	81	Villalba.....	24	.....	93	93
Jayuya.....	5	.....	49	49	Yabucoa.....	23	3	102	105
Juana Diaz.....	29	5	135	140	Yauco.....	11	6	124	30
Juncos.....	16	3	54	57					
Lajas.....	52	.....	215	215	Total.....	1,314	324	6,700	7,024
Lares.....	19	.....	150	150					

The amount expended per kilometer annually on the maintenance and repairs of municipal roads is shown in the following table:

Municipality.	Annual expenditure per kilometer.				Municipality.	Annual expenditure per kilometer.			
	1915-16	1916-17	1917-18	1918-19		1915-16	1916-17	1917-18	1918-19
Adjuntas.....	\$2.00	\$2.31	\$5.00	\$4.95	Juncos.....	\$26.31	\$21.06	\$20.18	\$19.00
Aguada.....	79.45	51.20	31.50	9.85	Lajas.....	4.53	2.23	6.48	5.00
Agua Buenas.....	4.14	4.15	4.41	4.41	Lares.....	21.95	10.32	10.38	11.02
Aguadilla.....	20.30	19.50	29.27	17.00	Las Marias.....	10.24	4.87	11.27	10.40
Aibonito.....	15.35	19.00	14.80	17.00	Las Piedras.....	.....	13.75	.....	.....
Añasco.....	3.10	3.90	4.85	1.43	Loiza.....	15.35	.....	18.56	.....
Arroyo.....	.....	.....	19.61	79.22	Manati.....	14.07	12.80	4.56	5.05
Barceloneta.....	15.44	14.11	8.82	14.21	Maricao.....	26.02	16.22	.....	13.63
Barranquitas.....	.....	.....	.....	.....	Maunabo.....	.....	18.86	.....	10.06
Barros.....	.....	1.10	2.54	5.83	Moca.....	4.28	3.71	3.40	4.40
Bayamon.....	23.55	18.00	19.22	15.26	Morovis.....	8.16	.....	6.50	5.59
Cabo Rojo.....	8.60	10.10	11.70	7.86	Naguabo.....	.....	144.00	152.00	1.19
Caguas.....	26.90	51.52	51.50	21.21	Patillas.....	16.17	9.56	6.96	7.36
Camuy.....	7.90	7.66	7.40	7.35	Peñuelas.....	5.93	8.90	7.00	9.19
Carolina.....	21.62	65.15	26.47	29.11	Quebradillas.....	5.35	6.14	8.86	8.86
Cayey.....	12.50	6.82	8.21	6.74	Rincon.....	11.48	.....	6.66	3.36
Ceiba.....	14.20	7.05	7.00	13.50	Rio Grande.....	19.86	15.08	23.02	15.06
Ciales.....	6.00	5.80	.....	.....	Rio Piedras.....	67.42	49.80	53.16	47.56
Cidra.....	.....	15.34	13.26	10.34	Sabana Grande.....	5.22	8.16	7.25	6.96
Coamo.....	6.05	5.59	.....	4.65	Salinas.....	15.56	34.90	47.60	23.66
Comerio.....	.....	.....	.....	10.95	San German.....	14.37	9.80	.....	.....
Corozal.....	1.26	.....	5.02	.....	San Lorenzo.....	31.66	23.33	21.66	18.26
Dorado.....	26.50	39.30	22.53	8.33	San Sebastian.....	4.76	6.91	8.92	5.35
Fajardo.....	22.21	35.55	2.95	16.00	Santa Isabel.....	75.43	73.62	82.91	22.96
Guanica.....	13.39	17.40	6.26	120.70	Toa Alta.....	5.94	.....	5.22	4.35
Guayama.....	56.10	80.01	48.63	25.43	Toa Baja.....	19.88	25.92	19.66	20.45
Guayanilla.....	3.17	9.11	.....	8.98	Trujillo Alto.....	18.82	45.47	11.06	12.75
Gurabo.....	.....	22.44	13.33	.....	Utua.....	12.51	14.30	.....	16.05
Hatillo.....	9.78	14.94	17.28	10.47	Vega Alta.....	12.00	46.50	21.21	33.05
Hormigueros.....	15.79	3.77	12.95	9.51	Vega Baja.....	8.02	13.20	12.30	10.05
Humacao.....	.....	24.08	.....	15.98	Vieques.....	.....	23.70	19.23	19.35
Isabela.....	8.07	6.23	5.23	8.17	Villalba.....	.....	.....	8.71	5.05
Jayuya.....	11.32	12.34	12.41	13.16	Yabucoa.....	9.95	.....	17.23	34.05
Juana Diaz.....	18.42	14.40	15.77	12.34	Yauco.....	12.53	13.84	12.96	14.26

CONSTRUCTION AND MAINTENANCE OF MUNICIPAL ROADS DURING THE FISCAL YEAR 1918-19.

The island is divided into 76 municipalities; 4 are included in the first class and 72 in the second and third classes. As provided by the municipal law approved on March 8, 1906, all construction and maintenance work of municipal roads done in municipalities of the second and third classes where the cost exceeds \$200 must be under the supervision of the commissioner of the interior. The department keeps records of all expenditures authorized and incurred on each road; plans and estimates for new constructions are passed upon by this office, and approval from the commissioner must be obtained for all contracts and appointments of the personnel employed on such constructions.

As the yearly budget for this department does not provide for personnel to supervise the construction of such roads, the work is intrusted to the road overseers of the maintenance of way, and as these employees have not much time to spare from their regular work, the supervision done by this department is practically confined to the approval of plans, estimates, expenditures, and appointments of personnel.

The following table shows the work done on roads during the fiscal year in the different municipalities which undertook such work.

Municipalities.	Grading.	Paving.	Ditches.	Road structures.		Expenditures.
				Structure.	Span.	
	Ltn. m.	Ltn. m.	Ltn. m.		m.	
Aguada.....				Concrete bridge.....	7	\$846.00
Aguadilla.....		1,000	700			446.20
Cabo Rojo.....	300	200	600			41.68
Carolina.....	2,685	2,266	1,155	2 concrete culverts.....	1	2,027.16
Fajardo.....	4,088	1,120	5,054			1,403.66
Guánica.....		6,546	600			7,195.62
Guayama.....	3,920					1,627.74
Humacao.....				{ 1 concrete bridge.....	6	1,002.37
				{ Culvert.....	1	
Juana Díaz.....	300	1,000	600			906.37
Manatí.....				2 culverts.....	1	60.78
Rio Piedras.....	1,300	1,300	3,000			2,748.67
Salinas.....	1,300	300	2,000			1,747.76
Santa Isabel.....	500	500	1,000	1 culvert.....	1	1,334.55
San Sebastián.....	1,600	330	2,000	1 concrete bridge.....	10	896.80
Vega Alta.....				4 wooden culverts.....		124.00
Vega Baja.....	5,200	5,200	10,000	{ 1 bridge.....	10	1,353.34
				{ 1 wooden culvert.....	1	
Tos Alta.....		940		2 culverts.....	1	526.61
					.000	
Maricao.....				1 concrete culvert.....	1	100.00
Total.....	21,193	20,708	26,709			24,789.31

The work is done very economically, due to financial and material help from neighbors interested in the improvement of municipal roads and in the construction of new roads and bridges.

The cost of maintenance and repairs of the 58 municipal roads amounted to \$55,712.

The municipalities of Barros and Ceiba made their own survey for their respective roads and prepared sketches for the same, expending the sum of \$230.

The municipal roads play a very important rôle in the system of communications of the island, serving as secondary branches for the transportation of the agricultural products from the farms to the insular roads on their way to the market.

By a law approved on March 14, 1907, the limit width between ditches for municipal roads was fixed at 7 meters 40 centimeters, beside the additional width necessary for the slope of the subgrade and embankment, to be increased on each side by 75 centimeters from the external border of the slopes. This law was amended on March 7, 1912, providing that when the traffic is not great the municipal council is authorized, with the consent of the mayor, to reduce this width to not less than 3 meters 50 centimeters; but as the greater part of these roads have not been surveyed the width in many places is very much reduced, and they follow a peculiar course, ascending and descending the mountains, with grades sometimes as much as 20 per cent. The only roads having the width determined by law and the convenient grades are those for which plans have been made directly by the personnel of the department of the interior and those made by the municipalities under supervision of the same department.

According to a law passed in March, 1919, the municipal roads must have the same width as the highways of the third class stated in the same law, that is, a width of not less than 5 meters between ditches, beside the additional width necessary for those ditches, slopes from cuts and embankments, to be increased each side by a strip of land a meter wide, to begin from the exterior border of the slope.

The new municipal law approved by the legislature on July 31, 1919, which will take effect on November 1, of the present year, creates in each municipality a "municipal assembly" and a council of administration. One of the members of this council is a "municipal commissioner of public works" who directs and manages all municipal works, and who in first-class municipalities must be a civil engineer or architect.

The municipalities according to this law shall have full legislative and administrative powers in all matters of a purely local nature, as the branch of public works. It is necessary that each municipal assembly, in accordance with the municipal commissioner of public works, prepare a plan for the construction of the municipal roads, so that a reasonable sum can be included annually in the budget of each municipality to macadamize and improve the actual roads, to construct new roads as per prepared plan, and to keep in better condition the roads already constructed.

The municipalities are authorized to establish any surcharge of the tax on taxable property of the municipality, provided that said surcharge not exceed one per cent in municipalities of the first class and second class, and one-half in municipalities of the third class. Such surcharge shall be devoted solely to the redemption of loans; to the development of elementary education; to the construction of municipal roads, etc.

It is of great importance, that the municipal commissioner of public works of each municipality be well aware of the necessity of attending effectively to the construction and maintenance of the municipal roads and to devote himself earnestly to the study of the best plan in order to propose to the municipal assembly adequate methods for the improvement of these lines of communication, by providing an outlet for the agricultural products from the interior of the island to the insular road system and thence to the principal markets of the island.

It would be useful for the second and third class municipalities to consign a sum in the budget to utilize the service of an engineer, who could be paid by two or three neighboring municipalities, and who could have charge of all public works in those municipalities, prepare plans for the municipal roads, attend to their construction and maintenance, and be the technical advisor of the local commissioner of public works and of the municipal assembly for those municipalities which have agreed to use his service. In this way with small expenses, each municipality would have their own engineer ready to be used in the branch of public works and to cooperate in their development with the local commissioner.

RAILROADS AND STREET RAILWAY LINES.

In the table which follows are given names, terminal points, and length of the railroad and tramway lines existing on this island which are being operated as public carriers.

Railroads and tramway lines.

RAILROADS.

Line.	Terminal points.	Length.
		<i>Kilometers.</i>
Central Fortuna.....	Ponce-Fortuna.....	8
Fajardo Development Co.....	Mameyes-Naguabo..... 38	57
	Fajardo-Playa..... 2	
	Fajardo-Rio Arriba..... 11	
	Sidings..... 6	
Línea Ferrea del Oeste.....	Catano-Bayamon.....	7
Ponce and Guayama Railroad Co.....	Ponce-Guayama.....	49
Porto Rico Railway, Light, and Power Co.....	Caguas-Rio Piedras.....	37.3
	Humacao-Playa..... 11	
	Humacao-Central.....	
Antonio Rolg.....	Ejemplo..... 2	15
	Two branches..... 2	
Northern Porto Rico Railroad Co.....	Vega Alta-Dorado..... 11.1	14.7
	Toa Baja branch..... 3.6	
	San Juan-Ponce..... 276	
American Railroad Co. of Porto Rico.....	Other sections..... 83	350
Total.....		547.5

Railroads and tramway lines—Continued.

STREET RAILWAYS.

Line.	Terminal points.	Length.
Mayaguez-Tramway Co.....	Mayaguez-Playa.....	2.4
Ponce Railway and Light Co.....	Ponce-Playa and branches.....	8.8
Porto Rico Railway, Light, and Power Co.....	San Juan-Rio Piedras and branches...	23.1
Total.....		34.3

In addition, there are many kilometers of narrow-gage railroad lines on the island belonging to the sugar centrals and used exclusively for the transportation of sugar cane.

DIVISION OF PUBLIC BUILDINGS.

HISTORICAL RÉSUMÉ.

A very interesting account is given regarding the early history of public buildings in Porto Rico, in the report of Brig. Gen. W. Davis, written in the year 1900, on the occasion of the closing of the American military government in Porto Rico.

Though we would like to quote the part of that report dealing with public buildings as a complement to the present one, we have to content ourselves, however, to only make reference to it, as the space allowed in this report is rather limited.

Neither in the report of Gen. Davis referred to, nor in the archives of this department, were found sufficient data to determine the cost of the buildings constructed by the Spanish Government. In table No. 2 at the beginning of this report it is seen that from the year 1871 to 1888 there was expended the sum of 120,908.23 pesos in the construction and repair of civil buildings. In the same table it is shown that the studies and construction of new lighthouses during the same period of time cost 155,450.21 pesos. The public buildings under the charge of the State during the last years of the Spanish régime were, according to the report of the board of public works, corresponding to the years 1875 to 1888, the following:

Locality.	Building.	Material.	Number of stories.	Constructed in.	Constructed by.
San Juan.....	Leper colony on Cabras Island.....	Brick.....	1	1878	Municipality.
	Audiencia.....	do.....	2	1645	F. Dominis.
	Intendencia.....	do.....	3	1851	Military engineer.
	Mercantile deposit.....	Frame.....	1	1842	Board of commerce.
	Office of public works, Allen No. 5....	Brick.....	2	(¹)	
	Public works storehouse.....	do.....	1	1876	
	Customhouse.....	do.....	1	1834	Board of commerce.
	Insular revenue guardhouse.....				
	Captain of the port building.....	Brick.....	2		Municipality.
	Penitentiary.....	do.....	1	1837	Jefatura de Obras Públicas.
Ponce.....	Internal revenue guardhouse.....				
	San Justo bastion guardhouse.....	Brick.....	1	1636	
	Customs guardhouse.....				
	San Juan bastion guardhouse.....	Brick.....	1	1739	
Mayaguez.....	Captain of the port building.....	do.....	2		
	Customhouse.....	do.....	2		
Pajardo.....	do.....	do.....	2		
Pajardo.....	Public works storehouse.....				
Agüadilla.....	Customhouse.....				
Agüadilla.....	Captain of the port building.....				
Arroyo.....	Church.....	Brick.....	1		
Humacao.....	Customhouse building.....				
Naguabo.....	Customhouse.....				
Gurabo.....	Port guardhouse.....				
Hato-Grande.....	Church.....				
Hato-Grande.....	do.....				

¹ Before 1832.

In this list there are not included the road menders' houses, nor the lighthouses of the island. These in each period were under the charge of the board of public works. The number of lighthouses in the year 1888 were as follows: Lighthouse of "Morro

Castle." Lighthouse of "Cabeza de San Juan." Lighthouse of "Morrillos de Cabo Rojo." Lighthouse of "Culebrita Island." Lighthouse of "Caja de Muertos."

During the Spanish régime the construction and maintenance of public buildings were under the charge of the board of military engineers, "The Jefatura de Obras Públicas" and the division of insular public works. The board of military engineers had under its charge all the forts, barracks, military hospitals, batteries, powder magazines, etc. "The Jefatura de Obras Públicas" and the division of insular public works attended to the civil construction. This organization as it refers to the insular government underwent various changes, in force for short periods of time until on February 11, 1898, there was named a secretary of the interior (secretario de fomento) who was in charge of all public works and chief of a division that was called "Jefatura de Obras Públicas," which board had under its charge the insular public buildings when the change of government occurred.

During the administration of Gen. Davis in 1899 the public work was reorganized in five sections, one of which was the division of public buildings under the charge of an architect who had in his care the construction and maintenance of insular public buildings. This division took charge of the following buildings:

Locality.	Building.	Occupied by—
San Juan.....	Diputación.....	Post office, state and war departments.
	Beneficencia.....	Insane asylum and district court of the United States.
	Asilo de Niñas (Las Madres) Santurce.....	Orphan girls.
	Convent of San Francisco.....	Used as a Catholic church.
	Convent of Santo Domingo.....	Used as a Catholic church.
	Nos. 3 and 5 Fortaleza Street.....	State and war departments offices.
	Intendencia.....	State offices.
	Public works warehouses, Marina.	
	Customhouse.	
	Revenue officers' headquarters.	
	Health officers' headquarters.	
	Penitentiary.	
	Arsenal.	
	Harbor master's headquarters.	
	Lazaretto, Cabras Island.....	Refuge for lepers.
	No. 69 San Francisco Street.....	War department offices.
	Boys' charity school (Institute), Santurce.....	Refuge for orphan boys.
	San Francisco barracks.....	War department.
	Executive mansion (Fortaleza).	
Ponce.....	Audiencia.	
	Quarantine station Miraflores Island.	
	Customhouse.	
	Harbor master's headquarters.	
Mayaguez.....	Public works offices.	
	Public works warehouses, Playa.	
Mayaguez.....	Customhouse.	
Aguadilla.....	Agronomic station.	
	Harbor master's headquarters.	
Fajardo.....	Office of the registrar.	
Humacao.....	Customhouse.	
Guayanilla.....	Customhouse.	
Arecibo.....	Customhouse.	
Caguas.....	Old post-office building.	
Rio Piedras.....	Post offices.	
Culebra.....	Agronomic station.	
	Delegate's house.	
	School building.	

During the first years of the American Government there was practically no construction of public buildings done, the activities of the government being solely in the maintenance of the existing buildings. The uncertainty that reigned during the first years, together with the hurricane of San Ciriaco that swept the island on August 8, 1899, explains very well this inactivity. During the period from October 18, 1898, in which took place the American occupation, to May 1, 1900, on which date the military government ceased, there was employed in the construction and maintenance of public buildings and lighthouses a total sum of \$97,009.53. Part of this sum was employed in new construction, although it has not been possible to obtain the total amount of these. The new constructions are as follows:

Locality.	Description.	Locality.	Description.
Fajardo.....	Reconstruction of the customhouse destroyed by the hurricane. Construction of a wing in the right side of the girls' charity school, Santurce. Construction of a model frame school in Puerta de Tierra (\$10,253.35). Construction of buildings at Miraflores magazine to make it a quarantine station (\$3,352.69).	Ponce.....	Reconstruction of the customhouse warehouse, destroyed by the hurricane (\$5,317.92). Construction of a fumigating house at the dock of Ponce (\$461).
		Coamo.....	Reconstruction of the civil hospital, destroyed by the hurricane (\$2,000).
		Mona.....	Completion of the lighthouse (\$15,295.37).
		Puerto Ferro..	Purchase and installation of a light (\$4,000).

The organic act, approved April 12, 1900, created a civil government that gave a stable form of government to Porto Rico. Clause 38 of this law authorized the omission of bonds on the part of The People of Porto Rico or the municipalities on not more than 7 per cent of the taxable property in order to raise funds with which to attend to whatever appropriations were authorized by the insular legislature. Soon the insular government and the municipalities began to make use of this right with the object of commencing the construction of roads and public buildings of all classes.

In the first place it was thought that the school buildings were of utmost necessity, which during the Spanish government and the period of the military government consisted of rented private houses which were, with rare exceptions, unfitted for school purposes. In order to remedy the situation the President of the United States turned over in January, 1900, to the treasurer of Porto Rico the sum of \$200,000, to be used in the construction of school buildings. This amount was later increased and reached a total of \$487,276.50. Eighteen rural frame schools were built and donated to the municipalities that provided the necessary land. The towns of Caguas, Guayama, Humacao, Coamo, San German, Yauco, Aguadilla, and Manati were given four-room school buildings of brick and concrete construction; Lares was provided with a two-room school building; and the towns of Fajardo, Arecibo, Mayaguez, and Ponce were given buildings of larger capacity. To carry out the preparation of the projects for the schools that were constructed with these funds as also to attend to the construction there was created in the department of education a technical division in charge of an inspector of buildings, assisted by the necessary personnel.

The organic act that became effective May 1, 1900, separated from the department of the interior the care and maintenance of lighthouses which were placed under the jurisdiction of the Federal authorities, and by a proclamation of the President of the United States of June 17, 1903, the customhouses were transferred to the Federal Government.

The maintenance of public buildings during the past years has been done with the following amounts:

1900-1900.....	\$97,009.93	1909-10.....	\$27,531.37
1900-1901.....	31,074.03	1910-11.....	40,198.70
1901-2.....	33,433.29	1911-12.....	23,377.13
1902-3.....	49,634.14	1912-13.....	47,008.15
1903-4.....	51,700.91	1913-14.....	45,245.82
1904-5.....	56,672.00	1914-15.....	29,802.32
1905-6.....	53,724.70	1915-16.....	25,000.00
1906-7.....	59,815.17	1916-17.....	65,208.80
1907-8.....	47,000.00	1917-18.....	52,000.00
1908-9.....	43,101.27	1918-19.....	64,000.00

In conformity with the provisions of the organic act the legislature passed on January 31, 1901, law No. 101 authorizing the municipalities to emit bonds with the object of constructing buildings, waterworks, sewers, and other municipal improvements. From this date we can say that the activities in the construction of municipal works commenced. At the commencing of this period of activities, the municipalities that had not municipal engineers made use of the engineers and private architects to carry on their works. The department of education, as has been stated, was equipped with the necessary personnel to make the plans of school buildings and direct the construction of the buildings. The intervention of the department of the interior in municipal work did not commence until the act No. 53 approved May 9, 1911, was put in force providing that the commissioner of the interior would intervene in these municipal works.

In 1901 the commissioner of the interior did not have at his disposal any special organization to attend to the public buildings. The board of public works provided a position of engineer or architect and an assistant. This situation continued until

the year 1907-8, in which year the legislature provided in the budget a division of public buildings under the commissioner of the interior, consisting as follows:

Number.	Position.	Annual salary.	Total.
1	Architect.....	\$3,000	\$3,000
1	Building inspector.....	2,000	2,000
1	Assistant building inspector.....	1,500	1,500
3	do.....	1,200	3,600
3	do.....	900	2,700
1	Carpenter, master.....	1,200	1,200
1	Plumber, master.....	1,200	1,200
1	Stenographer and typewriter.....	1,200	1,200
1	Draftsman.....	1,000	1,000
1	Clerk.....	750	750
1	do.....	600	600
1	Office boy.....	360	360
	Total per annum.....		19,110

The following table shows a list of the buildings constructed during the last 19 years. Although incomplete, this table gives approximately the work of most importance. The table shows also that the total cost of the public buildings is approximately \$4,200,000, which is an average of \$220,000 a year.

Insular public buildings constructed during the United States régime.

[Schools the property of the insular government are not included.]

Town and building.	Con- structed in—	Value.	Kind of con- struction.
Aguadilla: Office for the insular telegraph.....	1919	\$1,400	Frame.
Arecibo:			
District jail.....	1906	29,000	Brick.
Department of health offices.....	1912	1,400	Frame.
Sanitation stables.....	1912	3,300	Do.
Culebra: Hospital.....	1910	3,400	Concrete.
Guayama:			
Irrigation offices.....	1909	5,500	Do.
Sanitation stables.....	1912	2,800	Frame.
Humacao: District jail.....	1913	25,000	Concrete.
Mayaguez:			
Reform school.....	1906	130,000	Do.
Experimental station laboratory.....	1909	20,000	Do.
College of Agriculture, Degetau building.....	1909	30,000	Do.
Sanitation stables.....	1912	3,000	Frame.
College of Agriculture, science building.....	1915	25,000	Concrete.
Insular telegraph offices.....	1918	1,500	Frame.
Experimental station residence.....	1912	5,300	Concrete.
Ponce:			
Sanitation stables.....	1912	4,700	Frame.
Department of health offices.....	1912	4,000	Do.
Rio Piedras:			
Experimental station.....	1910	30,000	Concrete.
Convalescencia park.....	1908	10,000	
San Juan:			
Carnegie Library.....	1915	100,000	Do.
Insular fair (demolished).....	1911	20,000	Frame.
Sanitation stables.....	1912	10,000	Do.
Quarantine hospital.....	1912	16,000	Concrete.
Department of health offices.....	1912	5,000	Do.
Vieques: Jail.....	1906	9,000	Do.

School buildings constructed during the United States régime.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Aguada:				
1-classroom rural school.....	1905-6	School board.....	\$800.00	Wood.
1-classroom rural school (Lindsay).....		do.....	1,700.00	Do.
1-classroom rural school.....		do.....	1,700.00	Do.
5-classroom graded school.....	1911-12	Department of educa- tion.	8,100.00	Do.
Total, 5 buildings in 7 years.....			12,100.00	
Anasco:				
1-classroom agricultural school, "Ponce de Leon,".....	1902-3	Department of educa- tion.	1,560.00	Do.
1-classroom rural school.....	1907-8	do.....	1,000.00	Do.
"Hostos," 4-classroom graded school.....	1909-10	do.....	10,000.00	Stone.
"Ramirez de Arellano," 6-classroom School.....	1909-10	do.....	14,000.00	Concrete.
"Quijano," 1-classroom rural school.....	1909-10	do.....	1,000.00	Wood.
"Arrillaga," 1-classroom rural school.....	1909-10	do.....	1,000.00	Do.
"Pesante," 1-classroom rural school.....	1909-10	do.....	1,000.00	Do.
"Monagas," 1-classroom rural school.....	1909-10	do.....	1,000.00	Do.
Total, 9 buildings in 9 years.....			32,068.00	
Aguadilla				
"Franklin," 4-classroom school.....	1902-3	Department of educa- tion.	8,409.00	Brick.
"Baldorioty," 8-classroom school.....	1900-1901	do.....	16,000.00	Do.
"Lafayette," 4-classroom school.....	1900-1901	do.....	8,408.00	Do.
Three 1-classroom rural schools.....	1900-1901	do.....	3,000.00	Wood.
"Agustin Stahil," 12-classroom school.....	1913-14	Department of the in- terior.	21,641.00	Concrete.
Total, 7 buildings in 17 years.....			57,458.00	
Arecibo:				
"Jefferson," 22-classroom school.....	1902-1909	Department of educa- tion.	38,033.50	Brick and con- crete.
"Lincoln," 8-classroom school.....	1909-1911	Department of the in- terior.	16,000.00	Do.
Barrio "Esperanza," 1-classroom rural school.....	1909-1911	Department of educa- tion.	1,000.00	Wood.
Rio Arriba No. 2, 1-classroom rural school.....	1909-1911	do.....	1,000.00	Do.
"Factor," 1-classroom rural school.....	1909-1911	do.....	1,000.00	Do.
"Arrozal," 1-classroom rural school.....	1909-1911	do.....	1,000.00	Do.
"Bajadero," 1-classroom rural school.....	1909-1911	do.....	1,000.00	Do.
High school.....	1913-14	Department of the in- terior.	55,000.00	Concrete.
"Santana," 4-classroom rural school.....	1917-18	do.....	16,110.74	Do.
Total, 11 buildings in 16 years.....			162,439.24	
Arroyo:				
"Enrique Huyke," 6-classroom school.....	1906-7	Department of educa- tion.	5,630.00	Wood.
1-classroom rural school.....	1906-7	do.....	1,000.00	Do.
1-classroom agricultural school.....	1902-3	do.....	1,800.00	Do.
Total, 3 buildings in 5 years.....			8,430.00	
Adjuntas:				
"Irving," 4-classroom school.....	1903-4	Department of educa- tion.	18,000.00	Material.
Nine rural schools in the barrios Baltillo, Juan Gonzalez, Portillo, Vaca, Carzas, Vegas Arriba, Cap- uez, Yahuecas, Yahuecas Arriba. Total, 2 buildings in one year.....		do.....	9,000.00	Wood.
			27,000.00	
Albionito, "Brumbaugh," 6-classroom school.....	1903-4	Department of educa- tion.	18,000.00	Brick.
Agua Buenas:				
"Ramon Marin," 6-classroom school.....	1907-8	do.....	5,000.00	Wood.
2-classroom rural school.....	1915-16	do.....	1,800.00	Do.
4 rural schools in barrios "Baya- moncito," Agueyes Mulas, and Sonadoras.....	1905	School board.....	1,000.00	Do.
Total, 6 buildings in 11 years.....			7,800.00	

School buildings constructed during the United States régime—Continued.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Barceloneta:				
1-classroom rural school	1913-14	Department of the interior.	\$2,000.00	Concrete.
4-classroom school	1915-16	do.	4,031.00	Wood.
"Florida Afuera," 2-classroom school	1917-18	do.	6,000.00	Do.
"Palmas Altas," 2-classroom school	1917-18	do.	6,000.00	
Total, 4 buildings in 5 years			18,031.00	
Barranquitas:				
1-classroom agricultural school	1902-3	Department of education.	1,525.00	Wood.
1-classroom rural school	1909-10	do.	1,500.00	Do.
5-classroom school	1915-16	Department of the interior.	10,000.00	Concrete.
Total, 3 buildings in 14 years			13,025.00	
Barros:				
1-classroom agricultural school	1902-3	Department of education.	1,568.15	Wood.
5-classroom school	1915-16	Department of the interior.	13,000.00	Concrete.
Total, 2 buildings in 14 years			14,568.15	
Bayamon:				
1-classroom agricultural school, "Peabody,"	1902-3	Department of education.	1,650.00	Wood.
2-classroom school	1903-4	do.	7,639.80	Brick.
2-classroom rural school	1906-7	do.	1,300.00	Wood.
"Pajaro," 1-classroom rural school	1907-8	do.	1,000.00	Do.
"John Marshall," 4-classroom school	1907-8	do.	12,000.00	Brick.
"Horacio Mann," 6-classroom, school	1906-7	Department of the interior.	8,984.00	Concrete.
Total, 6 buildings in 6 years			32,573.80	
Cabo Rojo:				
1-classroom agricultural school	1902-3	Department of education.	1,538.17	Wood.
2-classroom school	1903-4	do.	8,699.00	Brick.
"J. L. M. Cuny," 4-classroom school	1903-4	do.	10,000.00	Do.
"Garfield," 1-classroom agricultural school	1902-3	do.	1,500.00	Wood.
Barrio "Carbonell," 1-classroom school	1902-3	do.	1,000.00	Do.
Barrio "Palmer," 1-classroom school	1902-3	do.	1,000.00	Do.
Barrio "Brau," 1-classroom school	1902-3	do.	1,000.00	Do.
Total, 7 buildings in 2 years			24,737.17	
Caguas:				
20-classroom graded school	1902-9	Department of education and department of the interior.	32,850.00	Concrete and brick.
1-classroom rural school	1906-7	Department of education.	996.18	Wood.
Total, 2 buildings in 5 years			33,846.18	
Camuy:				
1-classroom rural school	1903-4	Department of education.	1,805.00	Do.
"J. J. Acosta," 4-classroom graded school	1905-6	do.	3,500.00	Do.
"Emerson," 4-class school	1905-6	Department of education.	3,500.00	Do.
Three 1-classroom rural schools	1905-6	do.	3,000.00	Do.
6-classroom graded school	1916-17	Department of the interior.	10,756.00	Concrete.
2-classroom rural school "Zanja"	1918-19	do.	2,800.00	Wood.
Total, 8 buildings in 16 years			25,361.00	
Carolina:				
1-classroom rural school (Columbus)	1900-1901	Department of education.	1,650.00	Do.
8-classroom graded school No. 1	1907-8	do.	16,000.00	Material
1-classroom rural school	1907-8	do.	1,000.00	Wood.
Total, 3 buildings in 8 years			18,650.00	

School buildings constructed during the United States régime—Continued.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Caye:				
4-classroom school, "Benjamin Harrison."	1903-4	Department of education.	\$10,000.00	Brick.
1-classroom school "Jajome Bajo"...	1916-17	Department of the interior.	997.00	Wood.
1-classroom rural school, barrio "Maton."	1916-17	.....do.....	988.00	Do.
12-classroom graded school.....	1917-18	.....do.....	34,000.00	Concrete.
Total, 4 buildings in 15 years.....			45,985.00	
Ceiba: 1-classroom rural school, "Quebrada Seca."	1918-19	Department of the interior.	1,074.36	Wood.
Ciales: 6-classroom school.....	1911-12	.....do.....	10,000.00	Concrete.
Cidra:				
4-classroom school.....	1909-10	.....do.....	4,500.00	Wood.
Two 1-classroom rural schools.....	1909-10	.....do.....	2,000.00	Do.
Total, 3 buildings in 1 year.....			6,500.00	
Coamo:				
4-classroom school "Franklin".....	1902-3	Department of education.	8,409.00	Brick.
"William Penn," 1-classroom school	1905-6	.....do.....	1,000.00	Wood.
"Hostos," 6-classroom school.....	1905-6	.....do.....	7,384.00	Brick.
"Cuyon," 1-classroom school.....	1908-9	.....do.....	1,000.00	Wood.
Total, 4 buildings in 7 years.....			17,793.00	
Comerio:				
1-classroom school.....	1908-9	Department of education.	1,000.00	Do.
6-classroom school, "P. N. Ortiz".....	1913-14	Department of the interior.	12,000.00	Concrete.
Total, 2 buildings in 6 years.....			13,000.00	
Coroas:				
4 rural schools in barrios Cibuco, Abas Este, Padilla, Cuchillas.		Department of education.	4,000.00	Wood.
6-classroom school.....	1910-11	Department of the interior.	7,550.00	Concrete.
Total, 5 buildings in 1 year.....			11,550.00	
Culebra:				
Public building and cistern.....	1906-9	Department of the interior.	7,000.00	
Three 1-classroom rural schools.....	1906-7	Department of education.	3,000.00	Wood.
Total, 4 buildings in 3 years.....			10,000.00	
Fajardo:				
16-classroom school; "Columbus".....	1906-14	Department of education and department of the interior.	30,000.00	Concrete and brick.
8-classroom graded school.....	1911-12	Department of the interior.	16,000.00	Concrete.
Total, 2 buildings in 8 years.....			46,000.00	
Guanica:				
4-classroom school.....	1903-4	Department of education.	8,097.00	Brick.
1-classroom rural school (Arenas)...	1916-17	Department of the interior.	1,000.00	Wood.
1-classroom rural school (Arenas)...	1917-18	.....do.....	1,325.00	Do.
2-classroom rural school (Caños).....	1917-18	.....do.....	4,000.00	Concrete.
Total, 4 buildings in 15 years.....			14,422.00	
Guayama:				
"Eleuterio Derkes," 6-classroom school.	1907-8	Department of education.	11,000.00	Blocks.
"Jobos," 2-classroom school.....	1914-15	Department of the interior.	2,000.00	Wood.
4-classroom school.....	1902-3	Department of education.	9,350.00	Brick.
Total, 3 buildings in 13 years.....			22,350.00	

School buildings constructed during the United States régime—Continued.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Guayanilla:				
1-classroom rural school.....	1907-8	Department of educa- tion.	\$1,000.00	Wood.
4-classroom school.....	1908-10	Department of the in- terior.	6,000.00	Concrete.
3 rural schools in barrios Sierra Baja, Pastos, and Macana.	1908	Department of educa- tion.	3,000.00	Wood.
Total, 5 buildings in 3 years.....			10,000.00	
Guaynabo: Rural school barrio. "Gua- raguao."			1,000.00	Do.
Guarabo:				
1-classroom rural school.....	1900-1	Department of educa- tion.	1,795.00	Do.
"Matias Gonzalez," 8-classroom school.	1917-18	Department of the in- terior.	28,000.00	Concrete.
"Lafayette," 1-classroom rural school.	1908-9	Department of educa- tion.	1,000.00	Wood.
"Jimenez," 1-classroom rural school.	1908-9	do.	1,000.00	Do.
Total, 4 buildings in 18 years.....			29,795.00	
Hatillo:				
"Adrian M. Gandia," 4-classroom school.	1905-6	Department of educa- tion.	3,500.00	Do.
"Ruiz Belvis," 1-classroom rural school.	1905-6	do.	1,000.00	Do.
"Naranjito," 1-classroom rural school.	1905-6	do.	1,000.00	Do.
Barrio "Capaez," 1-classroom rural school.	1916-17	Department of the in- terior.	1,733.00	Do.
Total, 4 buildings in 12 years.....			7,233.00	
Humacao:				
"Ponce de Leon," 20-classroom school.	1902-16	Department of educa- tion and department of the interior.	37,950.00	Brick.
"Playa," 2-classroom rural school....	1907-8	Department of educa- tion.	6,000.00	Blocks.
High school.....	1915-16	Department of the in- terior.	40,000.00	Concrete.
2-classroom school (Las Piedras)....	1912-13	do.	4,000.00	Do.
1-classroom rural school.....	1901-2	Department of educa- tion.	1,835.00	Wood.
1-classroom rural school, barrio, "Montones."	1918-19	Department of the in- terior.	2,000.00	Do.
Total, 6 buildings in 17 years.....			91,785.00	
Isabela:				
"Corchado," 4-classroom school.....	1904-5	Department of the in- terior.	4,000.00	Do.
1-classroom rural school.....	1906-7	do.	1,000.00	Do.
"Muñoz Rivera," 6-classroom school.	1916	do.	2,500.00	Do.
1-classroom rural school.....	1906-7	Department of educa- tion.	1,000.00	Do.
Total, 4 buildings in 12 years.....			8,500.00	
Juana Díaz:				
"Hayes," 2-classroom school.....	1901-2	Department of educa- tion.	3,369.00	Do.
"Fernandez Juncos," 6-classroom school.	1904-5	do.	10,000.00	Brick.
Two 1-classroom schools.....	1905-6	School board.....	3,000.00	Do.
9 rural schools in barrios Salsch; Río Cañas (4 streets); Guayabal; Amuclas; Callabo; Clinton; Fije- ras; Ejilores Arriba; Descala- brado.	1905-6	Department of educa- tion.	12,000.00	Brick and wood.
Total, 13 buildings in 5 years.....			28,369.00	
Juncos: 1-classroom agricultural school..	1902-3	Department of educa- tion.	1,775.00	

School buildings constructed during the United States régime—Continued.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Lares:				
"Clay," 2-classroom school.....	1901-2	Department of educa- tion.	\$5,700.00	Brick.
"Palmer," 2-classroom school.....	.....do.	.....do.	5,000.00	Do.
Six 1-room rural schools in barrios "Buenos Aires," Rio Prieto, Lares No. 2, Piletas No. 1, Espino No. 1, Jobo No. 1.	.....do.	.....do.	5,000.00	Wood.
Total, 8 buildings in 1 year.....			15,700.00	
Lajas:				
1-classroom agricultural school, "Hamilton,".....	1902-3	Department of educa- tion.	1,683.00	Do.
"Perry," 4-classroom school.....	1904-5	.....do.	9,000.00	Brick.
Seven 1-classroom rural schools in barrios "Paris," Maguazo, Can- delaria, Sabana Yegua, La Plata, Costa, Parguera.	1904-5	.....do.	7,000.00	Wood.
Total, 9 buildings in 3 years.....			17,683.00	
Las Marias:				
1-classroom agricultural school.....	1902-3	Department of educa- tion.	1,770.00	Do.
2-classroom school.....	1905-6	.....do.	2,500.00	Do.
"Palmer," 4-classroom school.....	1905-6	.....do.	4,000.00	Do.
Four rural schools in barrios Rio Cañas, Furnes, Naranjales, Palma Escrita.	.....do.	.....do.	4,000.00	Do.
Rural school, barrio "Altosano".....	1917-18	Department of the in- terior.	1,300.00	Do.
Total, 8 buildings in 16 years.....			13,570.00	
Luquillo:				
2-classroom school.....	1918-19	Department of the in- terior.	7,500.00	Concrete.
3-classroom school. "R. M. Cin- trons."	1918-19	.....do.	11,000.00	Do.
Total, 2 buildings in 1 year.....			18,500.00	
Loiza:				
2-classroom school.....	1916-17	Department of the in- terior.	3,896.00	Do.
"Canovanas," 4-classroom school.....	1914-15	.....do.	7,000.00	Do.
Total, 2 buildings in 3 years.....			10,896.00	
Mayaguez:				
1-classroom rural school.....	1903-4	Department of educa- tion.	1,475.00	Wood.
4-classroom school.....	1902-3	.....do.	9,500.00	Brick.
"Paragut," 8-classroom school.....	1902-3	.....do.	16,000.00	Do.
Playa No. 2, 6-classroom school.....	1907-8	.....do.	12,000.00	Blocks.
Four rural schools in Leguisano, Rio Hondo, Rio Cañas, Malezas.	1918-19	Department of the in- terior.	8,000.00	Wood.
Three rural schools in barrios Grant, Morse, Las Vegas.	.....do.	Department of educa- tion.	3,000.00	Do.
6-classroom school and office.....	1909-10	Department of the in- terior.	10,000.00	Concrete.
14-classroom school.....	1913-14	.....do.	33,075.00	Do.
8-classroom school.....	1915-16	.....do.	18,000.00	Do.
High school.....	1916-17	.....do.	52,000.00	Do.
12-classroom school.....	1916-17	.....do.	36,000.00	Do.
Library and school office.....	1918-19	.....do.	11,000.00	Do.
Total, 17 buildings in 17 years.....			210,060.00	
Maunabo: 5-classroom school.....	1910-11	Department of the in- terior.	6,500.00	Blocks.
Maricao:				
2-classroom school.....	1905-6	Department of educa- tion.	2,000.00	Wood.
"Maricao," 4-classroom school.....	.....do.	.....do.	8,000.00	Material.
Rural schools in Montoso, Bucara- bones, Indiera Baja, Indiera Fria.	.....do.	.....do.	4,000.00	Wood.
Rural school, barrio "Indiera Alta".	1917-18	Department of the in- terior.	1,300.00	Do.
Rural school, barrio "Indiera Fria".	1917-18	.....do.	1,200.00	Do.
Total, 7 buildings in 13 years.....			16,500.00	

School buildings constructed during the United States régime—Continued.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Manati:				
4-classroom school.....	1902-3	Department of edu- cation.	\$8,400.00	Brick.
2-classroom rural school, "Rio Arriba Poniente,"	1918-19	Department of the interior.	3,000.00	Wood.
Rural schools in barrios Boquilla, Rio Arriba, Tierras Nuevas, Coto, Rio Arriba Poniente, 4-classroom school, "Grant"	1911	Department of edu- cation.	5,000.00	Do.
		Department of the interior.	7,000.00	Concrete.
Total, 10 buildings in 17 years.....			23,400.00	
Morovis: Two rural schools at Morovis Sur and Inabon.		Department of edu- cation.	2,000.00	Wood.
Moca:				
"F. M. Quifiones," 4-classroom school.	1909-10	Department of the interior.	6,000.00	Concrete.
Two rural schools at the barrios Voladares and Naranjo.		do.....	2,000.00	Wood.
Total, 3 buildings in 1 year.....			8,000.00	
Naranjito: Three rural schools at bar- rios Lomas, Cedro Bajo, Anones Arriba.		Department of edu- cation.	3,000.00	Do.
Naguabo: 10-classroom school.....	1916-17	Department of the interior.	20,000.00	Concrete.
Ponce:				
1-classroom agricultural school.....	1902-3	Department of edu- cation.	1,750.00	Wood.
"Roosevelt" industrial school, 12- classroom.	1903-4	do.....	22,000.00	Brick.
High and grammar school, 11 class- rooms.	1904-5	Department of edu- cation.	25,000.00	Do.
"McKinley," 12-classroom school....	1907-8	do.....	20,000.00	Blocks.
"Rufo Belvis," 6-classroom school....	1907-8	do.....	10,000.00	Do.
"Hamilton," 5-classroom school....	1902	do.....	10,000.00	Brick.
"Baldorioty," 6-classroom school....	1907-8	do.....	10,000.00	Blocks.
"Playa," 2-classroom school.....		do.....	2,000.00	Wood.
12-classroom school.....	1908-9	Department of the interior.	30,000.00	Concrete.
6-classroom school.....	1908-9	do.....	13,500.00	Do.
"Reina," 16-classroom school.....	1913-14	do.....	51,000.00	Do.
"Concordia," 16-classroom school....	1913-14	do.....	38,000.00	Do.
High school.....	1913-14	do.....	136,000.00	Do.
"Castillo," 16-classroom school.....	1913-14	do.....	45,000.00	Do.
Total, 14 buildings in 12 years.....			414,250.00	
Peñuelas:				
"Webster," 4-classroom.....	1901-8	Department of edu- cation.	5,000.00	Wood.
Rural school barrio "Quebradas" ..	1917	Department of the interior.	500.00	Do.
Total, 2 buildings in 16 years.....			5,500.00	
Patillas: 4-classroom school.....	1905-6	Department of edu- cation.	4,000.00	Do.
Quebradillas:				
1-classroom agricultural school.....	1902-3	do.....	1,675.00	Do.
4-classroom school, "Betances"	1907-8	do.....	4,300.00	Do.
"Dexter," Horacio Mann "R. Saavedra;" 1-classroom rural schools.		do.....	3,000.00	Do.
Total, 5 buildings in 6 years.....			8,975.00	
Rio Piedras:				
1-classroom agricultural school.....	1902-3	Department of educa- tion.	1,300.00	Do.
"Normal" School (university).....	1902-3	do.....	25,000.00	Brick.
"Modelo" School (university).....	1903-4	do.....	15,000.00	Do.
Principal's residence (university)....	1903-4	do.....	4,000.00	Wood.

School buildings constructed during the United States régime—Continued.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Rio Piedras—Continued.				
"Hawthorn," 12-classroom school.	1904-1911	Department of educa- tion.	\$30,000.00	Brick and con- crete.
1-classroom rural school.	1906-7	do.	950.00	Wood.
2-classroom school, "Hato-Rey"	1907-8	do.	3,500.00	Blocks.
1-classroom rural school.	1907-8	do.	1,000.00	Wood.
Three 1-classroom schools.	1907-8	do.	3,000.00	Do.
Dairy barn (university).	1910-11	Department of the in- terior.	5,500.00	Concrete.
Manual training shop (university).	1911-12	do.	2,500.00	Do.
Gymnasium and library (univer- sity).	1911-12	do.	10,000.00	Do.
Memorial hall (university).	1912-1916	do.	55,000.00	Do.
3-classroom school, Sabana Liana.	1914-15	do.	5,500.00	Do.
Total, 16 buildings in 14 years.			162,250.00	
Rio Grande:				
1-classroom agricultural school.	1902-3	Department of educa- tion.	1,719.00	Wood.
"Bancroft," 6-classroom school.	1903-4	do.	10,000.00	Brick.
Total, 2 buildings in 2 years.			11,719.00	
San Juan:				
20-classroom school, "J. J. Acosta".	1907-8	Department of educa- tion.	60,000.00	Blocks.
8-classroom school.	1907-8	do.	18,000.00	Concrete.
4-classroom school (Miramar).	1912-13	Department of the in- terior.	12,000.00	Do.
16-classroom school, Puerta de Tierra.	1916-14	do.	70,000.00	Do.
6-classroom school, annexed to J. J. Acosta.	1914-15	do.	5,200.00	Wood.
"R. Baldorioty," 18-classroom school.	1917-18	do.	166,000.00	Concrete.
Labra, 14-classroom school.	1917-18	do.	98,000.00	Brick.
R. Cordero, 10-classroom school.	1917-18	do.	56,000.00	Concrete.
Padre Rufo, 12-classroom school.	1916-17	do.	54,000.00	Do.
Luchetti, 12-classroom school.	1907-8	Department of educa- tion.	30,000.00	Blocks.
Total, 10 buildings in 11 years.			569,200.00	
San Sebastian:				
1-classroom agricultural school.	1902-3	Department of educa- tion.	1,720.00	Wood.
4-classroom school, "Whittier".	1903-4	do.	8,950.00	Brick.
2-classroom school, P. Blancos.	1917-18	Department of the in- terior.	2,700.00	Wood.
Total, 3 buildings in 16 years.			13,370.00	
Sabana Grande:				
1-classroom agricultural school, "Washington."	1902-3	Department of educa- tion.	1,641.00	Do.
4-classroom "Cooper," actually in repair for \$4,000.	1903-4	do.	9,000.00	Brick.
"J. P. Morales," 1-classroom school.	1907-8	do.	1,000.00	Wood.
Total, 3 buildings in 6 years.			11,641.00	
San German:				
4-classroom school, "Longfellow"	1902-3	Department of educa- tion.	7,400.00	Brick.
Rural school, barrio "Maresua".	1917-18	do.	1,000.00	Wood.
Total, 2 buildings in 16 years.			8,400.00	
Tos-Baja: 4-classroom school (John Fremont).	1906-7	Department of educa- tion.	4,000.00	Do.
Trujillo: 1-classroom rural school.	1907-8	do.	1,000.00	Do.
Utuado:				
1-classroom agricultural school.	1902-3	do.	1,050.00	Do.
1-classroom rural school.	1906-7	do.	1,000.00	Do.
2-classroom school at Caonillas.		do.	2,000.00	Do.

School buildings constructed during the United States regime—Continued.

Town and buildings.	Con- structed in—	Constructed by—	Cost.	Material.
Utuaño—Continued.				
1-classroom schools, Armstrong; H. Mami; Caguan.		Department of educa- tion.	\$3,000.00	Wood.
12-classroom graded school.....	1915-16	Department of the in- terior.	24,000.00	Concrete.
Total, 7 buildings in 14 years.....			31,050.00	
Vega Baja:				
8-classroom school, "J. G. Padilla".	1907-8	Department of the in- terior.	15,000.00	Blocks.
Almirante Centro, rural school.....	1916-17	do.	1,000.00	Wood.
Algarrobo, 2-classroom school.....	1916-17	do.	2,000.00	Do.
Almirante Norte, 1 classroom school	1916-17	do.	1,000.00	Do.
Total, 4 buildings in 10 years.....			19,000.00	
Vega Alta: 6-classroom school.....	1911-12	Department of the in- terior.	10,000.00	Concrete.
Vieques:				
"Gautier Benitez," 6-classroom school.....	1907-8	Department of educa- tion.	10,800.00	Blocks.
6-classroom school acquired.....	1915-16		5,000.00	Brick and wood.
2-classroom school.....	1911-12	Department of the in- terior.	4,000.00	Concrete.
Puerto Real, 2-classroom school.....	1917-18	do.	6,000.00	Do.
Total, 4 buildings in 11 years.....			25,800.00	
Salinas:				
4-classroom school, "R. Palmer"....	1907-8	Department of educa- tion.	7,600.00	Blocks.
2-classroom school.....	1907-8	do.	2,000.00	Wood.
"Boston" school.....	1901	do.	800.00	Do.
"R. Jueyes" school.....	1910	do.	500.00	Do.
"F. M. Quiñones," 1-classroom school.....	1916-17	do.	1,600.00	Concrete.
"Baldorioty" school.....	1913	Department of the in- terior.	15,000.00	Do.
"J. S. Quiñones," 1-classroom school	1916-17	Department of educa- tion.	1,500.00	Do.
"Gautier Benitez" school.....	1916	Department of the in- terior.	3,500.00	Do.
"Lopez," 2-classroom school.....	1916-17	Department of educa- tion.	3,500.00	Do.
"W. Wilson," 4-classroom school....	1917-18	do.	12,900.00	Do.
Total, 10 buildings in 11 years.....			48,900.00	
Santa Isabel:				
1-classroom rural school.....	1905-6	Department of educa- tion.	1,000.00	Wood.
"Brumbaugh," 8-classroom school.	1906-7	do.	8,000.00	Brick.
4-classroom school.....	1915-16	Department of the in- terior.	5,000.00	Do.
2-classroom school, "Descalabrado"	1917-18	do.	4,500.00	Concrete.
Total, 4 buildings in 13 years.....			18,500.00	
San Lorenzo: 6-classroom school.....	1913-14	Department of the in- terior.	10,000.00	Do.
Toa-Alta:				
1-classroom rural school.....	1900-1901	Department of educa- tion.	1,700.00	Wood.
3 rural schools.....		do.	3,000.00	Do.
4-classroom school.....	1912-13	Department of the in- terior.	4,000.00	Do.
6-classroom school.....	1916-17	do.	12,000.00	Concrete.
Total, 6 buildings in 17 years.....			20,700.00	
Yauco:				
4-classroom school.....	1902-3	Department of educa- tion.	7,500.00	Brick.
12-classroom school.....	1909-10	Department of the in- terior.	23,000.00	Concrete.

School buildings constructed during the United States régime—Continued.

Town and building.	Con- structed in—	Constructed by—	Cost.	Material.
Yucua—Continued.				
Columbia, 4-classroom school.....		Department of educa- tion.	\$8,000.00	Brick.
Garfield, 4-classroom school.....		do.	8,000.00	Do.
Rural schools at barrios "Mejías," "Betances," "Baldorioty.".....		do.	3,000.00	Wood.
2-classroom school.....	1915-16	Department of the in- terior.	3,200.00	Concrete.
Total, 6 buildings in 14 years.....			52,700.00	
Yabucoa:				
J. F. Cintron, 6-classroom school...	1904-5	Department of educa- tion.	12,000.00	Brick.
3 rural schools, 1 classroom.....	1906-7	do.	3,000.00	Wood.
2-classroom school.....	1911-12	Department of the in- terior.	3,300.00	Concrete.
Total, 5 buildings in 8 years.....			18,300.00	
Grand total.....			2,718,245.90	

Municipal buildings constructed during the United States régime.

Locality and building.	Con- structed in—	Value.	Material.
Adjuntas: Municipal slaughterhouse	1913	\$500.00	Concrete.
Agua Buena:			
Municipal meat shop.....	1915	1,419.00	Concrete and frame.
Municipal slaughterhouse.....	1915	1,136.00	Do.
Total, 2 buildings in 1 year.....		2,555.00	
Aibonito: Municipal hospital	1918	8,600.00	Do.
Añasco: Municipal slaughterhouse	1913	1,478.00	Do.
Arecibo:			
Municipal jail.....		2,500.00	Do.
Municipal slaughterhouse.....	1917	6,000.00	Do.
Market building.....	1917	3,900.00	Do.
Fire station.....	1908	5,000.00	Do.
Power house (aqueduct).....	1903	2,000.00	Masonry.
Total, 5 buildings in 14 years.....		19,400.00	
Arroyo:			
Municipal hospital.....	1913	7,000.00	Frame.
Municipal slaughterhouse.....	1906	800.00	Do.
Municipal meat shop.....	1910	500.00	Do.
Total, 3 buildings in 7 years.....		8,300.00	
Barceloneta:			
City hall purchased in.....	1913	5,000.00	Frame and masonry.
Municipal meat shop purchased in.....	1913	1,500.00	Do.
Municipal hospital.....	1914	3,000.00	Concrete.
Municipal slaughterhouse.....	1912	500.00	Frame and concrete.
Slaughterhouse in "Florida Adentro".....	1916	200.00	Do.
Total, 5 buildings in 4 years.....		10,200.00	
Barranquitas:			
Municipal hospital.....	1900	500.00	Frame.
Municipal meat shop.....	1906	200.00	Do.
Municipal slaughterhouse.....	1912	650.00	Frame and masonry.
Total, 3 buildings in 12 years.....		1,350.00	

Municipal buildings constructed during United States régime—Continued.

Locality and building.	Con- structed in—	Value.	Material.
Barros:			
Emergency hospital purchased in.....	1914	\$300.00	Frame.
Municipal meat shop.....	1910	200.00	Do.
Municipal slaughterhouse.....	1915	600.00	Concrete.
Total, 3 buildings in 5 years.....		1,100.00	
Bayamon:			
City hall.....	1907	10,959.00	Masonry.
Insane asylum (this building was originally used as a municipal jail. In 1916 was repaired by the de- partment of the interior, to be used as an insane asylum).....	1904	3,000.00	
City hall (Cataño).....	1912	3,718.00	Frame and concrete.
Market building.....	1916	5,000.00	Concrete.
Municipal hospital.....	1912	9,000.00	Do.
Total, 5 buildings in 12 years.....		31,677.00	
Cabo Rojo:			
"Betances" hospital.....	1903	1,800.00	
City hall.....	1907	8,000.00	
Market building.....	1907	12,000.00	
Municipal slaughterhouse.....	1910	1,300.00	
Total, 4 buildings in 7 years.....		23,100.00	
Caguas:			
Municipal meat shop.....	1910	7,000.00	Brick.
Market building.....		1,700.00	Frame.
Municipal slaughterhouse.....	1912	5,000.00	Frame and concrete.
Total, 3 buildings in 2 years.....		13,700.00	
Camuy:			
Municipal meat shop.....	1908	800.00	Frame.
Municipal slaughterhouse.....	1908	600.00	Do.
City hall.....	1915	2,000.00	Do.
Municipal hospital.....	1915	4,000.00	Do.
Total, 4 buildings in 7 years.....		7,400.00	
Carolina:			
Municipal slaughterhouse.....	1912	1,916.00	
Small hospital.....	1908	2,468.00	
Total, 2 buildings in 4 years.....		4,384.00	
Cayey: Municipal slaughterhouse.....	1909	1,368.00	Frame and concrete.
Ceiba:			
Morgue house.....	1916	738.00	Concrete.
Municipal meat shop.....	1918	324.00	
Total, 2 buildings in 2 years.....		1,062.00	
Ciales: City hall.....	1915	12,000.00	Do.
Cidra:			
City hall.....	1907	1,000.00	
Municipal building.....	1907	400.00	
Municipal meat shop.....	1913	200.00	Frame.
Total, 3 buildings in 6 years.....		1,600.00	
Coamo: Municipal slaughterhouse.....	1913	1,800.00	Concrete.
Comerio:			
Municipal meat shop.....		1,231.00	Do.
Municipal slaughterhouse.....	1915	800.00	Do.
Municipal hospital.....		600.00	Frame.
Total, 3 buildings.....		2,631.00	
Corozal:			
Municipal slaughterhouse.....	1910	500.00	
Municipal meat shop.....	1912	700.00	
Total, 2 buildings in 2 years.....		1,200.00	

Municipal buildings constructed during the United States régime—Continued.

Locality and building.	Con- structed in—	Value.	Material.
Fajardo:			
Ward for insane people.....	1915	\$200.00	Frame.
Office of the jailer.....	1915	200.00	Do.
Municipal slaughterhouse.....	1915	1,500.00	Concrete.
House of the waterworks keeper.....	1916	250.00	Frame.
House for the guard of the intake dam.....	1917	100.00	Do.
Municipal hospital.....	1919	23,000.00	Concrete.
House purchased during the Spanish régime and reconstructed in 1910.....		2,500.00	Frame.
Total, 7 buildings in 4 years.....		27,750.00	
Guanica:			
Municipal meat shop.....		800.00	Concrete.
Municipal hospital.....		1,500.00	Frame.
Municipal slaughterhouse.....		300.00	Concrete.
Total, 3 buildings.....		2,600.00	
Guayama:			
Emergency hospital.....	1908	3,000.00	Brick.
"Toribio" municipal hospital.....	1913	15,000.00	Brick and blocks.
Market building.....	1909	14,000.00	Concrete.
Municipal slaughterhouse.....	1908	4,000.00	Brick.
Municipal jail.....	1915	5,000.00	Do.
Total, 5 buildings in 7 years.....		41,000.00	
Guayanilla:			
Municipal meat shop.....	1907	1,000.00	
Morgue.....	1913	700.00	
Municipal slaughterhouse.....	1916	1,200.00	Concrete.
City hall.....	1917	5,000.00	Do.
Total, 4 buildings in 10 years.....		7,900.00	
Gurabo: Municipal hospital.....	1908	400.00	Frame.
Hatillo:			
City hall.....	1915	1,400.00	Do.
Municipal meat shop.....	1912	300.00	Do.
Municipal slaughterhouse.....		840.00	Concrete.
Municipal jail.....		150.00	Frame and masonry.
Total, 4 buildings in 3 years.....		2,690.00	
Hormigueros: Municipal slaughterhouse.....	1914	867.00	Concrete.
Humacao: "Toro Rios" municipal hospital.....	1910	4,000.00	Do.
Isabela: Municipal slaughterhouse.....	1912	1,100.00	Frame.
Juna Díaz:			
Municipal hospital.....	1907	6,050.00	Brick.
Municipal slaughterhouse.....	1912	2,500.00	Concrete.
Total, 2 buildings in 5 years.....		8,550.00	
Lares:			
Municipal slaughterhouse.....	1914	2,625.00	Do.
Market building.....	1907	4,000.00	Do.
City hall (this building was purchased in 1906).....		7,000.00	Masonry.
Total, 3 buildings in 8 years.....		13,625.00	
Las Marias:			
Municipal slaughterhouse.....	1912	1,250.00	Concrete.
Municipal meat shop.....	1915	400.00	
Total, 2 buildings in 3 years.....		1,650.00	
Las Piedras:			
City hall (purchased and repaired).....	1914	1,500.00	Frame.
Municipal meat shop.....	1917	500.00	Concrete.
Municipal slaughterhouse.....	1914	200.00	Frame.
Total, 3 buildings in 3 years.....		2,200.00	
Luquillo: Municipal meat shop.....	1916	1,000.00	Concrete.

Municipal buildings constructed during the United States regime—Continued.

Location and building.	Con- structed in—	Value.	Material.
Maricao:			
Municipal hospital	1901	\$2,000.00	Frame.
Old slaughterhouse	1901	50.00	
Market building	1908	2,500.00	
New slaughterhouse	1908	1,600.00	Concrete.
City hall	1910	11,000.00	
Total, 5 buildings in 9 years		17,150.00	
Maunabo:			
Slaughterhouse	1905	150.00	Frame.
City hall	1907	800.00	Do.
Municipal hospital	1908	1,500.00	Do.
Meat shop	1915	2,000.00	Concrete.
Total, 4 buildings in 10 years		4,450.00	
Mayaguez: Municipal slaughterhouse	1902	10,000.00	Masonry.
Morovis: Municipal meat shop	1915	1,500.00	Concrete.
Naranjito:			
Municipal meat shop	1910	253.00	Frame.
Municipal slaughterhouse	1911	150.00	Do.
Total, 2 buildings in 2 years		403.00	
Patillas:			
Municipal hospital	1907	7,000.00	Do.
Municipal meat shop	1918	1,900.00	Concrete.
Total, 2 buildings in 11 years		8,900.00	
Pefuelas:			
Municipal slaughterhouse	1917	2,000.00	Do.
Emergency hospital	1915	2,500.00	Do.
Total, 2 buildings in 2 years		4,500.00	
Ponce:			
Storehouse for deposit for the municipal dock	1914	5,590.00	Do.
Municipal slaughterhouse	1908	20,000.00	Masonry.
City hall (Playa)	1903	5,000.00	Concrete.
Municipal dock building	1907	323,207.00	Do.
Municipal stables	1910	15,000.00	Frame.
Municipal garage	1916	2,000.00	
Total, 6 buildings in 13 years		370,797.00	
Quebradillas:			
Municipal slaughterhouse	1904	200.00	Do.
Meat shop	1916	440.00	
Total, 2 buildings in 12 years		640.00	
Rincon:			
City hall	1907	1,000.00	Concrete.
Municipal slaughterhouse	1912	600.00	
Municipal meat shop	1912	300.00	
Total, 3 buildings in 5 years		1,900.00	
Rio Piedras:			
Meat shop	1918	500.00	Do.
Coach house		200.00	Do.
Municipal hospital	1916	18,000.00	Do.
Total, 3 buildings in 2 years		18,700.00	
Sabana Grande: Municipal slaughterhouse	1911	1,185.00	
Salinas:			
Slaughterhouse	1906	500.00	Frame.
Municipal hospital	1908	10,000.00	
Municipal stables	1918	4,500.00	
Morgue house	1914	800.00	
City hall	1916	16,000.00	
Total, 5 buildings in 10 years		31,800.00	Concrete.

Municipal buildings constructed during the United States régime—Continued.

Locality and building.	Con- structed in—	Value.	Material.
San German:			
Municipal slaughterhouse.....	1903	\$837.00	Frame and brick.
Market building.....	1910	10,000.00	Steel.
Total, 2 buildings in 7 years.....		10,837.00	
San Juan:			
Market building at Santurce.....	1909	25,000.00	Concrete.
Public baths.....	1909	8,234.00	Brick.
Hospital (medicine).....	1907-9	48,094.00	Do.
Hospital (surgery).....	1909	67,062.00	Do.
Hospital (administration); this building was im- proved in 1911, adding a nurse's department that cost \$1,460.	1909	23,410.00	Concrete.
Insane hospital.....	1916	10,763.00	Do.
Quarantine hospital at I a Perla.....	1907-9	1,625.00	Frame.
Residence of the aqueduct employee.....	1908	1,500.00	Do.
Morgue and autopsy building at Santurce's ceme- tery.	1910	2,150.00	Concrete.
Residence of the janitor at the Santurce cemetery...	1910	2,150.00	Do.
Total, 10 buildings in 7 years.....		189,968.00	
San Lorenzo:			
Municipal hospital.....	1914	4,000.00	Do.
Municipal slaughterhouse.....	1912	999.00	Do.
Total, 2 buildings in 2 years.....		4,999.00	
San Sebastian:			
Municipal hospital.....	1907	5,000.00	Frame.
Market building.....	1915	8,900.00	Concrete.
Insane hospital.....	1915	899.00	
Slaughterhouse.....	1915	2,176.00	Do.
Building purchased in 1919 to be used as a jail.....		500.00	Masonry.
Municipal music temple.....		800.00	Frame and concrete.
Morgue.....	1915	1,000.00	Concrete.
Total, 7 buildings in 8 years.....		19,275.00	
Tos Alta:			
Municipal slaughterhouse.....	1917	2,000.00	Do.
Municipal meat shop.....	1917	2,500.00	Do.
Total, 2 buildings in 1 year.....		4,500.00	
Trujillo Alto:			
Municipal meat shop.....	1910	300.00	Do.
Municipal slaughterhouse.....	1913	496.00	Do.
Total, 2 buildings in 3 years.....		796.00	
Utuado:			
City hall.....	1908	8,000.00	Frame and masonry.
Municipal slaughterhouse.....	1912	1,000.00	Masonry.
Municipal jail.....	1918	1,796.00	Concrete.
Municipal hospital.....	1918	9,096.00	Brick.
Total, 4 buildings in 10 years.....		19,890.00	
Vega Alta:			
City hall.....	1912	10,000.00	Masonry.
Municipal slaughterhouse.....	1911	1,052.00	Do.
Total, 2 buildings in 2 years.....		11,052.00	
Vega Baja:			
Municipal meat shop (was reformed in 1916 by the municipality).	1914	300.00	
Municipal slaughterhouse.....	1916	1,100.00	
Total, 2 buildings in 2 years.....		1,400.00	
Vieques:			
City hall.....	1903	12,000.00	Do.
Meat shop.....	1904	600.00	Do.
Municipal hospital.....	1912	22,000.00	Do.
Municipal slaughterhouse.....	1904	200.00	Frame.
Municipal building.....	1908	150.00	Do.
Total, 5 buildings in 9 years.....		34,950.00	

Municipal buildings constructed during the United States régime—Continued.

Locality and building.	Con- structed in—	Value.	Material.
Yabucoa:			
Market building.....	1913	\$6,600.00	Concrete.
Storehouse.....	1913	228.00	Frame.
Public scale (Romana).....	1913	135.00	Do.
School dining hall.....	1913	200.00	Do.
Morgue.....	1913	500.00	Concrete.
Municipal hospital.....	1913	10,000.00	Masonry.
Total, 6 buildings in 1 year.....		17,663.00	

Amount invested in the construction of public buildings in Porto Rico from the year 1900 to 1918.

Year.	Number of buildings.	Insular funds.	Municipal funds.	School board funds.	Total.
1900-1.....	7	\$20,145.00	\$500.00	\$12,408.00	\$33,053.00
1901-2.....	6	7,185.00	2,050.00	8,719.00	17,954.00
1902-3.....	37	73,554.00	10,000.00	69,439.00	152,993.00
1903-4.....	20	70,280.00	21,637.00	82,386.00	174,303.00
1904-5.....	17	20,000.00	4,000.00	62,800.00	86,800.00
1905-6.....	43	27,300.00	1,981.00	44,084.00	73,365.00
1906-7.....	35	185,000.00	1,500.00	49,910.00	236,410.00
1907-8.....	41	16,300.00	398,041.00	234,900.00	649,241.00
1908-9.....	24	18,000.00	81,518.00	49,500.00	149,018.00
1909-10.....	22	55,500.00	147,168.00	98,000.00	300,668.00
1910-11.....	20	38,900.00	69,453.00	38,550.00	136,903.00
1911-12.....	11	32,500.00	3,035.00	48,400.00	83,935.00
1912-13.....	29	85,500.00	50,893.00	31,000.00	167,393.00
1913-14.....	29	25,000.00	51,337.00	488,716.00	565,053.00
1914-15.....	11		12,557.00	19,700.00	32,257.00
1915-16.....	30	150,000.00	37,630.00	121,531.00	309,161.00
1916-17.....	30		56,091.00	207,470.00	264,161.00
1917-18.....	27	23,000.00	57,100.00	421,836.00	501,936.00
1918-19.....	23	4,900.00	76,914.00	44,374.00	126,188.00
Total.....					4,218,401.00

Amount expended in public buildings in Porto Rico by municipalities.

Municipality.	Number of buildings.			Insular funds.	Municipal funds.	School board funds.	Total.
	Insu- lar.	Munio- ipal.	School.				
Adjuntas.....		1	10	\$13,500.00	\$500.00	\$13,500.00	\$27,500.00
Aguada.....			4	5,750.00		6,350.00	12,100.00
Aguadilla.....	1		5	19,908.50		39,549.50	59,458.00
Agua Buenas.....			6	3,000.00	2,555.00	4,900.00	10,455.00
Aibonito.....		1	1	9,000.00	8,600.00	9,000.00	26,600.00
Añasco.....		1	8	795.00	1,478.00	29,795.00	32,068.00
Arecibo.....	3	5	9	7,600.00	54,500.00	130,144.24	192,244.24
Arroyo.....			3	4,215.00	8,300.00	4,215.00	16,730.00
Barceloneta.....		5	4		10,200.00	18,031.00	28,231.00
Barranquitas.....		3	3	762.50	1,350.00	12,262.00	14,374.50
Barros.....		3	2	784.00	1,100.00	13,784.08	15,668.08
Bayamon.....		5	6	15,786.90	31,667.00	16,786.90	64,240.80
Cabo Rojo.....			7	12,368.58	23,100.00	12,368.59	47,837.17
Caguas.....		3	2		13,700.00	33,846.18	47,546.18
Camuy.....		4	8	5,902.50	7,400.00	19,458.50	32,761.00
Carolina.....		2	3	825.00	4,384.00	17,825.00	23,034.00
Cayey.....		1	4	5,000.00	1,368.00	40,985.00	47,353.00
Celba.....		2	1		1,062.00	1,074.36	2,136.36
Ciales.....		1	1		12,000.00	10,000.00	22,000.00
Cidra.....		2	3		1,600.00	6,500.00	8,100.00
Coamo.....		1	4	8,396.50	1,800.00	9,396.50	19,593.00
Comerio.....		3	2		2,631.00	13,000.00	15,631.00

Amount expended in public buildings in Porto Rico by municipalities—Continued.

Municipality.	Number of buildings.			Insular funds.	Municipal funds.	School board funds.	Total.
	Insular.	Municipal.	School.				
Corozal.....		2	5		\$1,200.00	\$11,550.00	\$12,750.00
Culebra.....	5			\$13,400.00			13,400.00
Fajardo.....		7	2		27,750.00	46,000.00	73,750.00
Guanica.....		3	4	4,048.50	2,600.00	10,373.50	17,022.00
Guayama.....	2	5	3	8,800.00	41,089.00	22,350.00	71,650.00
Guayanilla.....		4	5		7,900.00	10,000.00	17,900.00
Guaynabo.....			1			1,000.00	1,000.00
Gurabo.....		1	4	897.50	400.00	28,897.50	30,195.00
Hatillo.....		4	4	2,250.00	2,690.00	4,983.00	9,923.00
Hormigueros.....		1			867.00		867.00
Humacao.....	1		6	25,000.00	4,000.00	91,790.00	120,790.00
Isabela.....		1	4	3,000.00	1,100.00	5,500.00	9,600.00
Juana Diaz.....		2	12	14,184.50	8,550.00	14,184.50	36,919.00
Juncos.....			1	887.50		887.50	1,775.00
Lares.....		3	3	7,850.00	13,625.00	7,850.00	29,325.00
Lajas.....			9	8,841.50		8,841.50	17,683.00
Las Marias.....		2	8	6,135.00	1,650.00	7,435.00	15,220.00
Las Piedras.....		3			2,200.00		2,200.00
Loiza.....			2			10,896.00	10,896.00
Luquillo.....		1	2		1,000.00	18,500.00	19,500.00
Manati.....			8	6,700.00		16,700.00	23,400.00
Maricao.....		5	8	7,000.00	17,150.00	9,500.00	33,650.00
Maunabo.....		4	1		4,450.00	6,500.00	10,950.00
Mayaguez.....	7	1	17	214,800.00	10,000.00	210,050.00	434,850.00
Moca.....		3	3	1,000.00		7,000.00	8,000.00
Moreno.....		1	2	1,000.00	1,500.00	1,000.00	3,500.00
Naguabo.....			1			10,000.00	10,000.00
Naranjito.....		2	3	1,500.00	403.00	1,500.00	3,403.00
Patillas.....		2	1	2,000.00	8,900.00	20,000.00	32,900.00
Pefiuelas.....		2	2	2,500.00	4,500.00	3,000.00	10,000.00
Ponce.....	2	6	14	8,700.00	370,797.00	414,250.00	793,747.00
Quebradillas.....		2	5	4,487.50	640.00	4,487.50	9,615.00
Rio Grande.....			2	5,858.50		6,859.50	11,719.00
Rio Piedras.....	7	4	7	157,000.00	45,700.00	46,250.00	247,950.00
Rincon.....		3			1,900.00		1,900.00
Sabana Grande.....		1	3	5,320.50	1,185.00	5,320.50	12,826.00
Salinas.....		5	10	5,200.00	31,800.00	43,700.00	80,700.00
San German.....		2	2	3,700.00	10,837.00	4,700.00	19,237.00
San Juan.....	5	10	10	151,000.00	189,988.00	599,200.00	910,188.00
San Lorenzo.....		2	1		4,999.00	10,000.00	14,999.00
San Sebastian.....		7	3	5,335.00	19,275.00	8,035.00	32,645.00
Santa Isabel.....			4	4,600.00		14,000.00	18,600.00
Tos Alta.....		4	6	2,350.00	5,298.00	13,350.00	25,998.00
Tos Baja.....			1	2,000.00		2,000.00	4,000.00
Trujillo.....			1	500.00		500.00	1,000.00
Utuado.....		4	7	3,525.00	19,890.00	27,525.00	50,940.00
Vega Alta.....			1			10,000.00	10,000.00
Vega Baja.....		2	4		1,400.00	19,000.00	20,400.00
Vieques.....	1		4	9,000.00		25,800.00	34,800.00
Yabucoa.....		6	5	7,500.00	17,663.00	10,800.00	35,963.00
Yauco.....			8	3,750.00		48,950.00	52,700.00
Total.....							4,218,404.33

WORK DONE DURING THE YEAR 1918-19—GENERAL.

A large part of the work done during the past fiscal year has consisted of investigating, preparing projects for and repairing buildings damaged by the earthquake of October 11, 1918, and subsequent seismic disturbances.

While the above has constituted a large part of the work, numerous projects have been made or are being made for new buildings, such as schools, both graded and high, town halls, hospitals, market buildings, and other municipal structures, and construction work has been carried on despite the effects of the earthquake, the high cost of materials, and the World War.

Work by administration, for school board or municipal work, has increased considerably during the year. This work, including the maintenance and repair of public buildings, represents a total expenditure during the year of approximately \$200,000. Uncompleted work now under way by administration will total, when completed, approximately \$100,000 more.

Most of the work under way by contract was completed before the end of the fiscal year and represents a total of over \$600,000, of which approximately \$200,000 was expended during the year.

Completed plans and specifications have been made for various classes of buildings for school boards and municipalities, and construction work either by contract or by administration will be commenced in the near future. The total of the estimates made for these works is approximately \$666,000. Many projects for buildings are now under way and will be completed as soon as possible consistent with the small force of architectural draftsmen that can be obtained in Porto Rico. The tentative estimates made for these buildings total approximately \$631,000.

THE EARTHQUAKE AND ITS EFFECTS.

The earthquake of October 11, 1918, and subsequent disturbances did considerable damage to all classes of buildings, the extent of the damage in each case depending on the kind of construction used in the building.

On the day following the first shock the architect and assistant commissioner left San Juan for a preliminary survey of the damage done in the western part of the island, where the shock was the greatest. A very hurried examination was made of the towns between San Juan and Mayaguez and between Mayaguez and Ponce. These were the towns which were found to have suffered the most, Aguadilla, Añasco, and Mayaguez being nearly in ruins. In Mayaguez assistance was rendered the municipal authorities in determining what structure should be demolished and what was thought could be repaired, or at least braced, until a more detailed examination could be made. Two engineers attending the College of Agriculture and Mechanic Arts were appointed to help the municipality in carrying on this work, as it was necessary that the architect be back in San Juan to direct such of the relief work as might come within his province.

The field force of the division was directed to assist the municipalities in their districts and many new employees were appointed to ascertain the extent of the damage and to make such temporary repairs to the buildings as would prevent their collapse, and if possible to allow them to be occupied.

Shocks continued to be felt, some light but many quite severe, so much so that some of the temporary bracing had to be replaced.

On October 17 the architect, accompanied by his assistants, the superintendent of public buildings and the chief draftsman, left San Juan to visit all the towns in Porto Rico in order to examine all insular, school, and municipal buildings and to take data which the commissioner of the interior could submit to the governor and the legislature, showing the extent of the damage done and the amounts necessary to repair, reconstruct, or rebuild these buildings. Strong shocks continued to be felt during eight days of the trip.

The estimates made on this trip, although necessarily hurriedly made, were found later, after more detailed examinations of the various buildings, to be approximately the amounts necessary to make the repairs.

The legislature, in its extraordinary session held November, 1918, passed law No. 8, making appropriations for repairing schools, municipal, and insular buildings. The appropriations made were based upon the report submitted by the architect to the commissioner of the interior. It should be noted that the legislature did not make appropriation for all the buildings damaged and noted in the architect's report, nor in some cases for the full amount necessary for repairs. The legislature made appropriations solely for those towns that had suffered the greatest damage, viz, Aguadilla, Añasco, Aguada, Mayaguez, and Ponce. The legislature also passed joint resolution No. 1, authorizing municipalities and school boards of the island to make loans, and impose special taxes with which to make reimbursements for these loans, with the object of reconstructing or repairing the buildings that had been damaged or destroyed by the earthquake.

In the report of the architect, to which reference is made, the following amounts were estimated for repairing the damages caused to the buildings:

Insular buildings.....	\$188,000
Municipal buildings.....	556,480
School buildings.....	179,269
Total.....	923,749

The appropriations made by the legislature are expressed in the following table, as are also the amounts estimated for the same buildings in the memorandum of the architect mentioned before:

Locality.	Purpose.	Assigned by the legislature.	Estimated by the department.
INSULAR BUILDINGS.			
Arecibo.....	For the repairs to the district court building.....	\$10,000	\$10,000
Mayaguez.....	For repairing the reform school building.....	5,000	5,000
	For repairing the College of Agriculture and Mechanical Arts of Mayaguez.....	15,000	15,000
Ponce.....	For repairing the district court building.....	25,000	25,000
	For repairing the blind asylum building.....	10,000	10,000
	For repairing the captain of the port building.....	2,000	2,000
San Juan.....	For repairing the girls' charity school.....	20,000	20,000
	For repairing the boys' charity school.....	5,000	5,000
	Total.....	92,000	92,000
MUNICIPAL BUILDINGS.			
Aguadilla.....	To help the municipality in the repair and reconstruction of the buildings.....	30,000	58,000
Aguada.....	do.....	5,000	26,000
Anasco.....	do.....	15,000	32,000
Isabela.....	do.....	5,000	25,250
Mayaguez.....	do.....	60,000	172,500
Utua.....	do.....	3,000	7,400
	Total.....	118,000	321,150
SCHOOL BUILDINGS.			
Aguadilla.....	For the repair of "Lafayette" School.....	800	800
	For the reconstruction of a 6-classroom school building.....	18,000	60,000
	For the reconstruction of the high school.....		40,000
	For a 12-classroom school.....		4,000
Anasco.....	For repairing "R. Arellano" and "Hostos" Schools.....	4,000	
Mayaguez.....	For an 8-room school building.....	24,000	14,000
	For the reconstruction of "Playa" No. 2 School.....		11,000
	For the reconstruction of "Roosevelt" School.....		7,000
	For repairing "Carbonell" School.....		380
	For repairing "R. de Arellano" and "Asenjo" Schools.....		6,500
Moca.....	For repairing the "F. Mariano Quinones" School.....	6,500	6,000
San German.....	For repairing "Antonio Martinez" School.....	18,000	20,000
	For the construction of 6-room school.....	2,500	2,500
San Sebastian.....	For the repair of "Whittier" School.....	12,000	
	For a 4-room school.....	2,500	
Lares.....	For repairing "Clay" School.....	4,000	200
Sabana Grande.....	For repairing "Cooper" School.....		
	Total.....	98,300	172,360

FACTORS TENDING TO RETARD CONSTRUCTION.

Up to the time the armistice was signed, great difficulties were encountered in securing materials from the United States due to the general embargo on building materials and because the manufacturers were devoting nearly all their time to the manufacture of war supplies. Since November, 1918, various schools boards and municipalities have held back on their projects for building, believing that the price of building materials would be materially reduced. It is believed that very little reduction will be made in any material, just the reverse being the case in some lines which have increased in price. Iron and steel which dropped in price in November and December are now about to go up according to trade journals. It is believed that buildings can be constructed cheaper now than next year, and if any reduction is made, it will not be for three or four years.

WORK BY ADMINISTRATION.

The repair and maintenance of public buildings is work of great importance in this division, and attention is called as in the past to the small yearly appropriations for their upkeep. These buildings are from 60 to 400 years old, are of an obsolete type of heavy brick and coral work masonry set in lime mortar, with a brick roof supported by native hardwood beams. Owing to their age, it is very difficult to keep them in repair, especially when the amounts appropriated by the legislature for their upkeep are considered. This past year \$64,000 was available for the repairs, while during the two previous years \$50,000 each year had to suffice. For the next two years \$50,000 each year is available.

When it is considered that these buildings are worth approximately \$2,500,000 it can be easily seen that from \$150,000 to \$200,000 at least should be spent each year in structural repairs.

With the money available only minor repairs, alteration to suit the growing needs of the government, personal for more space and painting could be done. It should be also understood that part of the money is spent in providing inspectors in the various towns where these buildings are located who make the repairs required during the year.

The funds appropriated for maintenance and repairs have been expended as follows, it being understood as the Bureau of S. P. & T. has not sent in all the bills for materials the various amounts may not be exactly correct. However, they are as near accurate as is possible at this time:

Maintenance and repairs of public buildings, fiscal year 1918-19.....	\$50,000.00
Maintenance and repairs of buildings and grounds, College of Agriculture and Mechanic Arts, Mayaguez.....	5,000.00
	64,000.00
Reimbursement from earthquake relief appropriation for emergency work done to public buildings at the time of the earthquake.....	5,828.27
Total.....	69,828.27
Transferred to appropriation for light.....	\$920.00
Transferred to appropriation for water.....	180.00
	1,100.00
Total amount available.....	68,428.27
Appropriation for light.....	2,000.00
Transferred from appropriation for maintenance and repairs.....	920.00
	2,920.00
Appropriation for water.....	1,800.00
Transferred from appropriation for maintenance and repair.....	180.00
Total.....	1,180.00

AMOUNT EXPENDED ON EACH BUILDING.

San Juan:	
Allen No. 1.....	180.50
Allen No. 2.....	1,088.20
Allen No. 3 (Palacio Rojo).....	1,750.72
Allen No. 5.....	657.12
Audiencia.....	2,698.64
Boys' charity school (Institute).....	1,921.26
Carnegie Library.....	254.54
Diputacion.....	5,292.12
Girls' charity school (Colegio de las Madres).....	3,962.37
Insane asylum (Beneficencia).....	1,550.13
Executive mansion (Fortaleza).....	4,624.21
Intendencia.....	7,082.42
Lepers' colony (Cabras Island).....	1,014.85
Buildings and grounds, naval station (Arsenal).....	4,038.07
Buildings of the old naval hospital (Barracones).....	127.91
Pavilion, San Juan, Res. Jgo. Wolf.....	15.94
Penitentiary.....	991.96
Public works storehouse, Marina (Hornos Militares).....	548.35
Police headquarters, San Juan.....	830.18
Polvorin, department of education.....	286.75
Quarantine hospital, Marina.....	190.38
Sanitation stables and shed, Marina.....	196.62
Ponce:	
Blind asylum.....	844.53
Captain of the port building.....	73.10
District court and jail building (El Costillo).....	778.20
Public works storehouse.....	1,198.68
Reconstruction of the telegraph office.....	1,346.54
Mayaguez:	
Reform school.....	796.96
Captain of the port building.....	65.97
Infantry barracks.....	94.17
College of Agriculture and Mechanic Arts, App. No. 43, buildings and grounds.....	4,694.58
Rio Piedras:	
Experimental station.....	509.83
Convalescencia buildings.....	923.26
Police headquarters.....	179.18
Arecibo:	
District court.....	863.27
District jail.....	2,678.51
Sanitation office building.....	243.84
Guayama: Jajome Alto, governor's residence.....	2,408.81
Humacao: District jail.....	386.73
Miscellaneous:	
Small buildings for which no allotment was made.....	4,000.00
Salaries of inspectors, draftsmen, transportation, supplies, etc.....	7,300.00
Total.....	68,758.63

In addition to the maintenance and repair of public buildings, various buildings were constructed by administration throughout the year for school boards and municipalities, as will be seen by the appended tables. These range in cost from \$500 to \$40,000, and were so constructed either because no contractor could be obtained to do the work or the work was of such a character that it would be difficult, if not impossible, to make a fair estimate of cost and project for the completed work. Of these only a few are deserving of special account, as all the repairs caused by the earthquake are in general the same, viz, rebuilding and patching walls, placing tension rods, relaying bricks, roofs, and floors, building buttresses, etc. These works are now under way in all the larger cities and most of the smaller towns and total \$125,000.

SCHOOL BUILDINGS AT LUQUILLO.

Two new schools were constructed in Luquillo during the year. One a two classroom with domestic science and library, the other a four-classroom building. The former is the gift of Dr. Santiago Veve of Fajardo and cost approximately \$8,000; the latter was paid from a loan secured by the school board and cost \$11,000. Both buildings are of one story, of reinforced concrete construction, with galvanized iron roof. The concrete is hatchet dressed and with the white trimmings, dark green woodwork, red roof, and situated within 150 feet of a beautiful beach the buildings present a very pleasing appearance.

FAJARDO HOSPITAL.

Early in the year a contract was let for the construction of a municipal hospital for Fajardo for \$19,000. This building was donated to the municipality by "Dona Encarnación Aboy viuda de Cintron." The contractor showed such poor progress that at the end of three months, he having placed only concrete to a short distance above the floor line, the work was taken over by the department and completed by this division for his account. The building is of one story, having wards for 10 women and 10 men, with private rooms and the necessary other rooms for a hospital of this size. The walls are hatchet dressed and the low projecting roof is covered with spanish tile. The building as completed presents an attractive appearance. Work is now under way on fences, roads, walks, and drives for this building, which will cost approximately \$2,700.

STUDENTS' ARMY TRAINING CORPS.

In the early part of the year the Students' Army Training Corps was organized in the University of Porto Rico. No quarters were available in Mayaguez, so funds were obtained from the governor in October for erecting the necessary buildings on the grounds of the College of Agriculture and Mechanic Arts.

Three buildings were erected, a dormitory with 100 beds, a mess hall, and large toilet. The buildings are of light but strong frame construction stained green, with galvanized iron roofs. They cost when completed \$15,000. These buildings are now used for classrooms by the college as one of the old structures, the "Degetau Building" was destroyed by fire during the earthquake.

BUILDINGS BY CONTRACT.

The legislature in its session of 1917 placed in the budget of 1918-19 an appropriation of \$30,000 for the construction of additional dormitories at the girls' and boys' charity schools. Contracts for these works were let early in the year and were recently completed. The additions consist of three-story dormitories added to similar structures erected from funds appropriated for the previous fiscal year. The buildings are of reinforced concrete with frame construction for floors and roof, with roof covering of galvanized iron. These new dormitories will provide for 125 additional orphans in each school.

Of the buildings erected by this office the schools both graded and high form in volume and cost a large part of the work. These structures range from small rural schools at \$1,800 to high schools at \$400,000.

The graded schools are from 2 to 18 rooms in size and are generally constructed with walls, gallery floors, and stairways of reinforced concrete, and classroom floors and roof of frame construction, the roofs having generally either galvanized iron or tile coverings. The classrooms are of a standard size, 24 by 30 feet and are well lighted and ventilated, one side of the room being all windows with an air circulation provided by means of ventilators over blackboards on the opposite side. Wide corridors and stairways for each two rooms are provided. As many of the town,

have not adequate sewage systems, it is necessary to devise methods for disposing of the sewerage from the toilets. This is done by some form of septic and filtering tanks. In the absence of sufficient water supply, rain-water tanks are provided either on the roofs or in the ground. In the latter case tanks are built outside of the building and the water raised to the desired level by windmills or hand pumps. The following is a brief description of a few of the more important buildings of this class which have been completed during the year.

CAYEY SCHOOL BUILDINGS.

The 12-classroom graded school of Cayey was built from a loan obtained by the school board and is situated on a large plot of ground near the eastern edge of the town. The building is rather difficult to place as regards style, but may be stated as a modified Spanish renaissance. The plan is shaped like the letter "H," two classrooms forming each leg and the crossbar, both on the first and second story. The main corridor, an arcade, connects the two end wings across the front, and from it on either side are secondary corridors that lead to the rooms and toilets on each wing. The second floor has a partially covered porch over the arcade below, the covering being a tile roof supported on large wood brackets. The stairways are located in the side corridors. This building, as completed, including inspection, cost approximately \$36,000.

GURABO SCHOOL BUILDING.

The eight-classroom graded school in Gurabo was built from an amount of \$23,000 assigned from the "school extension fund" appropriated March 14, 1907, supplemented by funds of the school boards. It is constructed on a fairly level plot of ground just east of the town on the main road. In plan it is like the letter "U" with four rooms on both the first and second floors. The main entrance and corridor on the short axis of the building leads to arcade on the rear, on which are the doors leading to the classrooms and toilets for boys and girls and the stairways. The second floor contains the four classrooms, two on either side, and a principal's office over the main corridor. The building is simple in design, following no particular style, having plain chipped concrete walls relieved by brick architraves, and horizontal bands with a heavy very plain cornice. Flower boxes are placed at the front of the two ends. This building cost, with inspection, about \$26,000.

AGUIRRE SCHOOL BUILDING.

The four-classroom building at Central Aguirre was constructed from a donation received by the school board of Salinas, and is located in the grounds of the Central Aguirre Sugar Co., upon land given by it. The building is of one story, having two classrooms, book room, and principal's office in the center portion faced by a wide arcade. The other classrooms are located at each end, the short side facing the front and separated from the center portion by corridors that lead to the rear and to the boys' and girls' toilets. The roof is low, with cut rafters exposed, and having a covering of Spanish tile. The design is of Spanish mission type and presents a very attractive appearance. The work, including all expenses, cost about \$15,000.

The other schools outside of San Juan are more or less the same as the three previously described but differ in design.

In San Juan, as the school board has or can obtain more funds per classroom for the schools, a better type of structure is designed. The size of classrooms, corridors, and stairways are the same as for other towns, but here all the work is of reinforced concrete, walls, floors, stairways, etc., making a more fireproof building. The corridors and stairways have a covering of red tiles, the classrooms of narrow boards. The roof coverings are either of slate or tile. Throughout the buildings a better and therefore more costly type of school is made. Two schools for San Juan were completed during the year, "Roman Baldoricty de Castro Graded and Technical School" on San Francisco Plaza, and the "Rafael Cordero Graded School" near Cerra Street, Stop 15, Santurce.

ROMAN BALDORICTY DE CASTRO SCHOOL BUILDING.

This building is constructed upon the site of an old "Franciscan monastery" which was torn down to make way for the new structure and which was built soon after Ponce de Leon commenced the erection of the present city of San Juan, nearly 400 years ago. The old building was used for various purposes after being discontinued as a monastery and lately as a school, although very unfit for that purpose.

The new building is located about 40 feet back from the old plaza and 90 feet from the new street recently built through the plaza. In plan it is similar to the letter "I," with one leg facing the plaza, one side being a minimum distance of 18 feet from Luna Street, the other the same distance from the new plaza, while the rear faces a yard that extends to Tamarindo Alley. The building is three stories in height, and is a revival of the Greek as adopted to school buildings, the details as far as possible being in the Greek Doric. The building presents an academic as well as a pleasing appearance. The lower or first story has a slight batter, is of smooth concrete, and forms a base upon which rests the two upper stories. On the front there is on each floor a very large lobby which on the two upper floors is open and is formed by four large Doric columns extending through the upper floors. This open lobby or loggia is inclosed on either side by two end wings containing small windows in harmony with the chosen style. The roof is covered with flat red shingle tile.

The ground floor is entered by three large double doors opening off the lobby. This lobby leads to the office of the school board, the supervising principal, two 6-foot stairways, and a 12-foot corridor extending back to rear entrance. On either side of corridor there is one toilet room, large manual training shop, for plumbing, carpentry, masonry, and automobiles, drafting room, teachers' rest room, and two 6-foot stairways at rear. The first floor contains the same lobby, corridor, and stairways, two toilet rooms, principal's office, library, and 12 classrooms. The upper or second floor, in addition to lobby, corridors, two toilets, and stairways, contains two large domestic-science rooms, six classrooms, and an assembly hall at rear, having a capacity of about 620. The cost of this building, including expenses but not including furniture, was about \$170,000.

RAFAEL CORDERO SCHOOL BUILDING.

The "Rafael Cordero" school at Cerra Street, Santurce, a two-story all reinforced concrete building, is V shape in plan, having an arcade on the front superimposed by a colonnade inclosed by the end wings at either side. The arcade, 10 feet wide, leads directly to two classrooms and principal's office, to stairways at either side, and to secondary corridors leading to the rear on which are located two class rooms on either side, to two toilets and to the rear yard. The upper floor contains teachers' rest room, four classrooms, and two toilets. The building as designed is an adoption of the early colonial renaissance. The arcade of the first story has trimmings of brick, the colonnade above being of Doric columns. The end wings, terminating in gables, have large windows for lighting the stairways and are ornamented with cartouches, garlands, and ornamental wrought-iron balconies. The concrete has a chipped surface which contrasts very well with the gray of the woodwork and the variegated colored slate of the roof. The building, including expenses, cost about \$60,000.

VARIOUS BUILDINGS.

Rural schools, both of frame and concrete, have been constructed during the year and are proving satisfactory.

The municipal buildings consist of hospitals, meat shops, slaughterhouses, jails, etc. These are generally small structures and sufficient note, it is believed, is given in the statistics at the end of this report. The buildings are generally of reinforced concrete, with galvanized-iron roofs, and are equipped with the various appliances that fit the needs of each class of building.

CENTRAL HIGH SCHOOL OF PORTO RICO.

While no construction work has been undertaken, requests for bids will soon be made on the new high school that is to be built in San Juan, the drawings and specifications for which are nearly completed. The building is to cost approximately \$400,000.

The site chosen for this school is at Stop 21, Santurce, on the main carretera, and is the same as that occupied by the old high school. The ground at present is very much above the street and has a high retaining wall, especially at the west side. This will all be removed, as the new building, which will be located 50 feet back from the new line of the carretera, would otherwise be unseen. The yard is to have a 300-foot retaining wall at the sidewalk and to terrace back from this to the building. Driveways are to be made at either side that will extend around the building. Owing to the shape of the lot a plan was finally chosen that in general has the shape of the letter "Y," with the open or southern part facing the street.

In the plan the two branching parts of the "Y" contain all schoolrooms, while the leg contains a large gymnasium and auditorium.

The building is of three stories and designed in the Spanish renaissance, and is approached by a wide sidewalk from the street between the east and west sections to a wide lobby in front of the auditorium. This façade of this section is composed of six columns surmounted by an enriched entablature which is further surmounted by an attic treatment having highly enriched finials. The lobby on the first or ground floor leads to the gallery of the gymnasium and to the east and west corridors. The gymnasium has a clear floor space of 45 by 75 feet with side sections for apparatus work and two large galleries for spectators on either side which together will hold 250 people. The second-floor lobby leads to east and west corridors and to the auditorium. The auditorium, which has a gallery entered from the third story lobby, has a capacity of nearly 1,400. The interior is simple in design, the ornamentation being confined to simple pilasters and beam treatment for side walls and curved ceiling and to the stage. This stage will be of ample capacity for the holding of regular plays as it is deep and contains four dressing rooms.

The east and west sections each have center corridors with rooms on each side. These rooms are 24 by 30 feet long in general, in special cases the length is increased to fit the needs of the special rooms. Each wing has on each floor two wide stairways, one near the front of the building and the other adjacent to the central lobby, also large toilet rooms on each floor for the girls and boys. At the front of each wing is a large room 30 by 60 feet.

The east wing contains in the basement, which is in the rear, showers and toilet for girls which are to be used in connection with the gymnasium, also a bicycle room. The first floor contains in addition to the stairways and toilet, general and private office for the principal, seven classrooms and library; second floor, teachers rest room, eight classrooms, study hall; third floor, eight classrooms and music room.

The west wing contains in the basement which is at the rear, toilet, showers, and lockers for boys to be used in connection with the gymnasium, together with bicycle room. The first floor in addition to stairways and toilet contains superintendent of building room, four classrooms, and rooms assigned to manual training; second floor in addition to toilet and stairways contains one classroom, the rest of the floor being divided between rooms for physics, chemistry, general science, bookkeeping, stenography, and typewriting; the third floor two classrooms, free-hand drawing, large study hall, and rooms for domestic science.

The building is of practically fireproof construction; all walls, floor, corridor, and stairways are of reinforced concrete, the exterior walls are finished in smooth concrete and part in chipped surface, part of the ornamental work being in color. The interior walls and ceilings are plastered, all schoolrooms having a sand finish. The corridors stairways, auditorium, study halls are to be finished partly plastered. The finished floors in all schoolrooms are to be of wood, the floors of corridors and stairways are to be of terrazzo with red tile border; all windows and doors are of wood, painted. The roof covering is to be of red spanish tile, manufactured in Porto Rico.

It is believed that this work will go ahead within a short time as the money will probably be available in the near future.

Construction work done during the fiscal year 1918-19.

A—Paid from insular funds. B—Paid from municipal loans. C—Paid from municipal current funds.

Town.	Description of building.	Funds.	Expended, 1918-19.	Total cost of work.
SCHOOL BUILDINGS.				
Aguadilla.....	Repairs to Lafayette School.....	A	\$408.44	\$800.00
Barceloneta.....	2-classroom reinforced concrete school, Florida Afuera.	C	4,659.45	5,835.30
	2-classroom reinforced concrete school, Palmas Altas.	C	2,131.20	5,618.50
Camuy.....	2-classroom frame school building, Zanja.....	C	2,484.00	2,484.00
Celba.....	1-classroom frame building, Quebrada Seca.....	AC	907.19	1,074.36
Cayey.....	12-classroom reinforced concrete school building....	BC	2,923.31	33,984.00
Guanica.....	1-classroom frame school building, barrio Arenas....	C	1,325.00	1,325.00
Gurabo.....	8-class room reinforced concrete school building....	CBA	13,249.91	25,996.78
Lolza.....	4-classroom reinforced concrete school building, Canovanas.	C	684.35	6,843.63

Construction work done during the fiscal year 1918-19—Continued.

Town.	Description of building.	Funds.	Expended, 1918-19.	Total cost of work.
Mayaguez.....	1-classroom frame school, barrio Leguisamos.....	C	\$1,603.80	\$1,782.00
	1-classroom frame school, barrio Rio Hondo.....	C	1,818.00	2,020.00
	1-classroom frame school, barrio Rio Canas.....	C	1,603.80	1,782.00
	1-classroom frame school, barrio Maleras.....	C	1,800.00	2,000.00
	2-classroom addition to Playa School No. 2.....	C	5,127.80	5,127.80
	Reinforced concrete school library and office building.....	C	9,132.67	9,132.67
	Water supply, College of Agriculture and Mechanical Arts.....	A	2,049.00	2,606.82
	Alterations and addition to reform school.....	A	7,283.53	29,267.00
	Reinforced concrete high school.....	ACB	200.00	51,475.52
Manati.....	2-classroom frame school, Rio Arriba Poniente.....	C	2,800.00	2,800.00
San Juan.....	Reinforced concrete dormitories for boys' and girls' charity schools.....	A	44,379.39	44,379.39
	10-classroom reinforced concrete school building, Stop 15, Santurce.....	B	10,733.85	56,144.67
	18-classroom reinforced concrete school building, San Francisco Plaza.....	BC	47,144.44	165,496.30
	18-classroom brick school building, Stop 18, Santurce.....	BC	11,114.45	98,166.00
Salinas.....	4-classroom reinforced concrete school building, Central Aguirre.....	C	1,941.02	11,577.75
Santa Isabel.....	2-classroom concrete school building, barrio Descalabrado.....	B	824.64	4,223.00
San Sebastian.....	2-classroom frame school building, "Piedras Blancas.".....	C	200.00	2,734.35
MUNICIPAL BUILDINGS.				
Fajardo.....	Municipal hospital.....	C	6,000.00	20,000.00
Juncos.....	Repairs and reconstruction of city hall building.....	B	1,861.81	7,709.00
Patillas.....	Fence around cemetery.....	B	819.46	819.46
	Reinforced concrete meat shop.....	B	771.23	1,801.93
Salinas.....	Sidewalks and roadway around city hall.....	C	3,551.52	4,518.97
Toe Alta.....	Reinforced concrete meat shop.....	C	87.30	1,170.61
Utua.....	Municipal hospital.....	B	3,508.12	8,645.00
	Municipal jail building.....	B	179.45	2,310.51
MISCELLANEOUS WORKS.				
Rio Piedras.....	Installation of electric and gas service, experimental station.....	A	2,564.13	2,564.13
San Juan.....	Traveling bookcases for Carnegie Library.....	A	720.00	720.00
	Furniture for telegraph and telephone offices.....	A	989.07	989.07
WORK BY ADMINISTRATION.				
Aguada.....	Repairs to "N. G. Font" School.....	C	748.77	748.77
Aguadilla.....	Repairs to "Lafayette" School.....	A	479.82	800.00
	Frame office building for insular telegraph.....	A	1,385.55	1,385.55
	Repairs to roof A. Stahl School.....	C	2,670.15	2,670.15
Anasco.....	Repairs to Ramirez de Arellano and de Hostos School.....	A	889.29	4,000.00
Arecibo.....	Repairs to district court.....	A	1,631.33	10,000.00
Bayamon.....	Repairs to municipal hospital.....	C	925.45	925.45
Comerio.....	Repairs to "P. N. Ortiz" School.....	C	1,463.97	1,463.97
Fajardo.....	Municipal hospital.....	C	14,000.00	20,000.00
	Improvements to municipal hospital building.....	C	172.12	2,754.35
Las Piedras.....	1-classroom frame rural school, barrio Montones.....	AC	1,086.16	1,086.16
Louisville.....	3-classroom reinforced concrete school building.....	A	10,932.59	10,932.59
	2-classroom reinforced concrete school building.....	C	7,232.85	7,232.85
Mayaguez.....	Repairs to reform school.....	A	1,250.98	5,000.00
	Repairs to roof of high school.....	C	34.70	100.00
	Construction of quarters for S. A. T. C. College of Agriculture.....	A	15,000.00	15,000.00
	Repairs to Roosevelt School.....	C	1,704.56	1,704.56
	Furniture for the insular telegraph office.....	A	246.85	246.85
Manati.....	Repairs to Grant School.....	C	236.82	700.00
Ponce.....	Repairs to captain of the port building.....	A	771.28	2,000.00
	Repairs to blind asylum.....	A	1,480.47	10,000.00
	Repairs to district court and jail buildings.....	A	2,755.61	25,000.00
	Construction of a telephone office at Mella.....	A	65.00	65.00
Rio Piedras.....	Construction of the tuberculosis sanatorium at "Cuatro Cogollos.".....	A	39,470.93	39,470.93
	Repairs to Garcia Cepeda School.....	C	504.99	934.37
	Fence for R. Vila Mayo School.....	C	856.00	856.00
	Alterations to Manual Training University of Porto Rico.....	A	2,087.90	2,087.90
	New roof on Practice School, University of Porto Rico.....	A	5,198.30	5,198.30
Various.....	Earthquake relief funds.....	A	54,060.57	60,000.00

Construction work done during the fiscal year 1918-19—Continued.

Town.	Description of building.	Funds.	Expended, 1918-19.	Total cost of work.
Rio Piedras.....	Alterations to Memorial Hall, University of Porto Rico.	A	\$2,563.39	\$2,563.39
	Miscellaneous repairs, University of Porto Rico...	A	2,129.92	2,129.92
	Miscellaneous repairs, experimental station.....	A	237.17	237.17
San Juan.....	Construction of a ranchon at boys' charity school.....	A	2,147.97	2,147.97
	Repairs to boys' charity school, Santurce.....	A	4,771.98	10,000.00
	Repairs to girls' charity school, Santurce.....	A	4,357.50	15,000.00
	Repairs to bulkhead shed.....	A	613.42	613.42
	Installation of a bell system at Carnegie Library...	A	47.00	47.00
	Fence for Padre Rufo School.....	C	1,389.50	1,389.50
	Construction of furniture for the insular telegraph office.	A	113.39	113.39
Vieques.....	Athletic park.....	C	1,281.00	3,311.35
	Repairs to Victor Dutell School.....	C	400.87	400.87
	Repairs to Leguillon School.....	C	4,874.52	4,874.52
	Repairs to Gautier Benitez School.....	C	3,098.51	3,098.51
Total.....			97,840.36	905,016.24

Completed projects of work to be undertaken.

NOTE.—By project is meant the complete working drawings and specifications, including memoranda general and special conditions, and proposal.

Town.	Project.	Estimated cost.
Aguada.....	1-classroom frame rural school.....	\$2,000.00
	1-classroom reinforced concrete school, barrio "Rio Grande".....	3,000.00
Agua Buenas.....	1-classroom frame school, barrio "Mulas".....	2,000.00
Barranquitas.....	Stairs for school building.....	800.00
Carolina.....	1-classroom reinforced concrete school, barrio "Cedros".....	3,000.00
Celba.....	2-classroom concrete school.....	7,295.98
	1-classroom frame school, Chupacallos.....	3,000.00
Corozal.....	1-classroom frame school, Palos Blancos.....	2,090.00
Guanica.....	6-classroom, reinforced concrete.....	35,000.00
Hormigueros.....	3-classroom frame school.....	6,000.00
Loiza.....	4-classroom frame school, Mediania Alta.....	6,800.00
Mayaguez.....	Opening windows at 12-room school.....	212.30
Moca.....	Repairs to "Francisco M. Quinones" School.....	6,500.00
Morovis.....	Graded-school building.....	20,000.00
Naguabo.....	1-classroom frame rural school, Dajao.....	2,000.00
Penuelas.....	1-classroom frame rural school, Tallaboa Alta.....	2,000.00
	1-classroom frame school, barrio Tallaboa Alta.....	2,000.00
Rio Piedras.....	Alterations to experimental station.....	14,000.00
San Juan.....	8-classroom reinforced concrete school, Stop 25, Santurce.....	65,000.00
	High school.....	400,000.00
Sabana Grande.....	1-classroom frame school, barrio "Rayo".....	2,000.00
Toa Baja.....	1-classroom frame rural school, Candelaria.....	2,000.00
Vega Alta.....	1-classroom frame rural school, "Espinoza".....	2,000.00
MUNICIPAL BUILDINGS.		
Agua Buenas.....	Municipal jail.....	1,400.00
Albionito.....	Municipal slaughterhouse.....	1,800.00
Ciales.....	Repairs to city hall.....	1,805.78
	Municipal slaughterhouse.....	1,500.00
Fajardo.....	Customhouse.....	14,000.00
	Municipal meat shop.....	1,000.00
Maricao.....	Municipal hospital.....	6,371.83
Maunabo.....	Municipal jail.....	2,300.00
Quebradillas.....	Municipal slaughterhouse.....	1,253.80
Patillas.....	Reinforced concrete meat shop.....	1,361.48
San German.....	Improvements to cemetery.....	3,412.99
	"Santo Domingo" Park.....	2,504.07
	Municipal slaughterhouse.....	1,912.18
Vega Baja.....	Municipal hospital.....	12,000.00
Total.....		40,830.91

Projects in course of preparation.

Town.	Project.	Estimated cost.
Aguadilla.....	Municipal hospital.....	\$12,000.00
	Market building.....	18,000.00
	8-classroom school building.....	30,000.00
	12-classroom school building.....	45,000.00
Adjuntas.....	Repair to Irving School.....	3,000.00
Bayamon.....	Manual training shop.....	2,500.00
	Repairs to cemetery.....	1,700.00
	Repairs to insane asylum.....	1,100.00
	Repairs to municipal court and jail building.....	5,500.00
	Repairs to city hall.....	6,200.00
Coamo.....	Reconstruction of city hall.....	35,000.00
	Repairs to cemetery.....	3,000.00
	Repairs to municipal hospital.....	2,000.00
Cayey.....	Construction of a cemetery.....	5,000.00
Fajardo.....	Alterations to a building for high school.....	2,500.00
Humacao.....	Repairs to Ponce de Leon School.....	1,000.00
	Repairs to high school.....	3,000.00
	Repairs to Playa School.....	2,500.00
Isabela.....	Municipal city hall.....	5,000.00
Juana Diaz.....	2-classroom reinforced concrete building, barrio "Capitanejo".....	6,400.00
	1-room addition to rural school, barrio "Capitanejo".....	3,000.00
	1-room reinforced concrete school building.....	3,200.00
Loiza.....	Fence around de Hostos School.....	3,000.00
Mayaguez.....	Reconstruction of Degetan Building College of Agriculture and Mechanical Arts.....	45,000.00
	Construction of a municipal hospital.....	50,000.00
	Repairs to poor asylum.....	20,000.00
	Reconstruction of city hall.....	50,000.00
	Repairs to municipal theater.....	15,000.00
	Reconstruction of Playa No. 2 School.....	24,000.00
Naguabo.....	Municipal theater.....	10,000.00
	Repairs to cemetery.....	2,500.00
	Repairs to market.....	3,000.00
	2 stories to city hall building.....	12,000.00
Rio Piedras.....	Dining hall for tuberculosis sanatorium.....	10,000.00
Salinas.....	Faculty residence University of Porto Rico.....	75,000.00
	1-room frame school building, barrio "Jueyes".....	2,000.00
	1-room frame school building, "Quebrada Yegua".....	2,000.00
San German.....	Repairs to city hall.....	6,000.00
	Repairs to Antonio Martinez School.....	6,000.00
Santa Isabel.....	Repairs to municipal city hall.....	20,000.00
San German.....	12-classroom school building.....	42,000.00
San Sebastian.....	8-classroom school building.....	28,000.00
Sabana Grande.....	Repairs to Cooper School.....	4,000.00
Yabucca.....	Municipal laundry.....	2,500.00
Total.....		628,600.00

DIVISION OF MUNICIPAL WORKS.

REVIEW OF PAST ACTIVITIES.

This division was created in July 1, 1911, as a subdivision of the bureau of public works, but the great increase of the work intrusted to the new division made necessary its organization as a separate division in 1913. An act entitled "An act authorizing municipalities, school boards, and other dependencies of The People of Puerto Rico to make certain provisions in ordinances enacted for the purpose of obtaining loans from the insular government or issuing bonds" was approved on March 9, 1911. As it provided that all municipal improvements constructed from funds obtained under this act should be supervised, inspected, and approved by the commissioner of the interior, who must also approve the plans, specifications, and contracts for the same, it was necessary to organize an office which would have charge of all work on street pavements, electric plants, sewer systems, waterworks, and other municipal improvements, leaving the work on municipal roads under the control of the "bureau of public works" and assigning all work regarding municipal and school buildings to the "division of public buildings," which had been in operation for several years. Although under the new law, the municipalities had the right to employ private engineers for the preparation of the different projects, nearly all the public works built by the municipalities during the last few years have been finished from plans and specifications prepared by the division of municipal works, due, undoubtedly to the advantages offered by this division, especially regarding the moderate cost of the projects.

Before 1911, as during the period of Spanish rule, the projects for municipal works were prepared by engineers engaged in private practice, and were approved by the commissioner of the interior or by the "Jefatura de Obras Públicas," respectively. From 1898 to 1911 the bureau of public works passed on all projects for municipal improvements, but had no intervention in the actual execution of the work, while the old "Jefatura de Obras Públicas" of the Spanish Government granted permits for the preliminary investigations, authorized the engineer engaged by the municipality to prepare the project, approved the project itself, approved the appointment of the engineer to be in charge of the construction work, made the final liquidation, and declared the final acceptance of the work.

Seven systems of waterworks, one sewer system, and four electric light plants were in operation at the inauguration of the American Government.

WATERWORKS.

The waterworks of Mayaguez and Naguabo were constructed in 1867; those of Juana Diaz and Guayama in 1868; the Ponce waterworks in 1878; the Patillas system in 1892; and that of San Juan in 1895. The Mayaguez system was rather ample and with several improvements which have been made is giving service to-day, although very deficiently. The Naguabo works consist of a pipe line about 1 kilometer long from the Quebrada Grande Creek to the public square in the town where public hydrants are installed. The Juana Diaz system is the same in operation to-day; it is very poor and inadequate for present needs. The Guayama waterworks were improved in 1890 and furnished service to the city up to two years ago when the whole system was practically rebuilt. The Ponce system, after being improved and extended several times, is in operation to-day, although the service is very deficient on account of the great increase of population. The old waterworks of Patillas are still furnishing water to the town, but as the distribution system is very incomplete, the service is very poor. The increase of population of the city of San Juan has required extensive improvements in the system of waterworks, which were completed last year. The Arecibo system was under construction at the end of the period of Spanish rule and was completed in 1903 in accordance with the original plans. It has also proved insufficient and it has been necessary to prepare a project of improvements which include a new distributing reservoir and a main pipe line of ample capacity.

Of the seven systems of waterworks constructed during the period of the Spanish rule, five were in operation in 1878 and two were built from 1888 to 1898, no progress being attained during the years elapsed from 1878 to 1888. During the 20 years of American Government 31 systems of waterworks have been constructed, of which 30 are owned and operated by municipalities, and one, that of Aguas Buenas, by a private citizen. Six systems of waterworks, all belonging to municipalities, were constructed from 1898 to 1908, and 1 private system and 24 municipal systems were completed from 1908 to 1918.

The following statement gives an idea regarding the situation as to water supplies in the island and shows that 38 towns are provided with more or less efficient systems of water supply:

Cities and towns provided with waterworks.

Arecibo, fair pumping system, water power used.
Aguadilla, has a modern gravity supply system.
Aguas Buenas, gravity system inadequate.
Albonito, gravity system, improvement completed.
Barranquitas, modern gravity system.
Caguas, gravity system, pipe line inadequate.
Cayey, gravity system.
Ciales, excellent gravity system.
Coamo, good gravity system.
Comerio, modern gravity system.
Corozal, modern gravity system.
Fajardo, excellent gravity system.
Guayama, excellent gravity system.
Guayanilla, good pumping system.
Guanica, good pumping system.
Gurabo, excellent gravity system.
Humacao, excellent gravity system.
Isabela, small pumping plant.
Jayuya, good gravity system.
Juana Diaz, poor and inadequate system.

Juncos, good gravity system.
Lares, modern gravity system.
Maricao, excellent gravity system.
Maunabo, excellent gravity system.
Mayaguez, very poor gravity system.
Naguabo, small gravity system.
Naranjito, good gravity system.
Patillas, inadequate gravity system.
Penuelas, excellent gravity system.
Ponce, inadequate gravity system.
Quebradillas, small pumping plant.
Río Piedras, included in San Juan system.
Salinas, good pumping system.
San Juan, fair system, electric pumping plant with rapid filters.
Utua, excellent gravity system.
Vieques, small pumping plant.
Yabucoa, good gravity system.
Yauco, excellent gravity system.

As there are 76 towns in the island, the aforesaid statement shows that 50 per cent of them are provided with water supply systems.

SEWER SYSTEMS.

At the inauguration of the American government there was only one sewer system on the island, that of San Juan, constructed before 1878. From 1878 to 1898 no progress was made in this line, the work being limited to a few isolated storm water sewers in some towns. During the last 20 years six sewer systems have been completed, one before 1908 and the other five in the period from 1908 to 1918. The systems of Rio Piedras and Yauco are under construction, the last one being practically completed.

Sewer systems are found in the seven following towns: Aguadilla, Arecibo, Caguas, Cayey, Fajardo, Lares, and San Juan.

As there are 76 towns in the island, this list shows that 9.21 per cent of them are provided with sewer systems.

ELECTRIC LIGHT SYSTEMS.

In 1898 only four systems of electric light, all owned by private companies, were in operation, those of the cities of San Juan, Ponce, Mayaguez, and Utuado constructed from 1893 to 1898.

From 1898 to 1908 only one new system, the municipal hydroelectric plant of Arecibo, was completed. During the last 10 years 4 municipal systems and 46 privately owned and operated systems have been constructed, making a total of 55 electric light systems in operation to-day. Two towns have double systems operated by different plants; Manati is supplied by a local plant and by the Porto Rico Railway Light & Power Co., and in Utuado the commercial lighting is furnished by a local company and the lighting of the streets and public buildings is supplied by a small municipal hydroelectric plant.

Towns and villages provided with electric light systems.

Local plant:

Private—

Oil engines—

Ajuntas.
Anasco.
Barceloneta.
Cabo Rojo.
Cayey.
Sabana Grande,
San German.

Gas engines—

Manati,
Yauco.

Steam engines—

Mayaguez,
Ponce.

Hydraulic motors—

Barros,
Lares,
Maricao,
Morovis,
Peñuelas,
Utuado.

Municipal—

Hydraulic motors—
Arecibo,
Utuado.

Distribution system:

Private, supplied by—

Comerich hydroelectric plant—

Bayamon.
Caguas.
Carolina.
Cataño.
Culba.
Comerio.

Distribution system—Continued.

Private, supplied by—Continued.

Comerich hydroelectric plant—Continued.

Dorado.
Fajardo.
Fajardo Playa.
Guaynabo.
Gurabo.
Humacao.
Humacao Playa.
Juncos.
Las Piedras.
Loiza (new).
Loiza (old).
Luquillo.
Mayeyes.
Manati.
Naguabo.
Naguabo Playa.
Rio Grande.
Rio Piedras.
San Lorenzo.
San Juan.
Toa Alta.
Toa Baja.
Trujillo Alto.
Vega Alta.
Vega Baja.
Yabucoa.

Carito hydroelectric plant—

Santa Isabel.

Municipal, supplied by—

Carito hydroelectric plant—

Arroyo.
Guayama.
Salinas.

RECAPITULATION.

The following table shows the progress attained in municipal public works every 10 years from 1878 to 1918, separating the works constructed during the last 20 years of Spanish rule from those built since the American government was inaugurated in this island:

Progress attained in municipal public works, 1878-1898, 1898-1918.¹

	Spanish rule.				American rule.			
	In operation in 1878.	Progress every 10 years.		In operation at the end of the Spanish rule.	Progress every 10 years.		In operation in 1918.	Difference from 1898 to 1918.
		1878 to 1888.	1888 to 1898.		1898 to 1908.	1908 to 1918.		
Water works:								
Municipal.....	5	0	2	7	6	24	37	30
Private.....	0	0	0	0	0	1	1	1
Total.....	5	0	2	7	6	25	38	31
Sewer systems.....	1	0	0	1	1	5	7	6
Electric light systems:								
Municipal.....	0	0	0	0	1	4	5	5
Private.....	0	0	4	4	0	46	50	46
Total.....	0	0	4	4	1	50	55	51

¹ For progress attained in municipal buildings, plazas, cemeteries, etc., see report of "Division of public buildings."

ORGANIZATION.

The permanent personnel of this division consists of the engineer in charge of the municipal works, who is the chief of the division, an assistant engineer, and a stenographer, whose salaries are paid from the insular budget and are not charged to the municipalities. The salaries of the additional personnel, which is taken as needed for surveys, preparation of projects, and inspection of construction work, as well as all other expenses incurred by this division, are paid from appropriation authorized by an act, approved on March 11, 1913, entitled "An act making an appropriation for the study of municipal works and for carrying out the same" and repaid by the municipalities in accordance with vouchers rendered through the office of the auditor of Puerto Rico, for each job.

ACTIVITIES OF THIS DIVISION DURING THE FISCAL YEAR 1918-19—WORK DONE.

The following works started during the previous fiscal year were completed during the year 1918-19:

 Diversion of the "Quebrada Mameyes" creek in Ponce.

 Paving of the streets around the plazas "Degetau" and "Muñoz Rivera," Ponce.

 Construction of an electric distributing system for Arroyo.

The following works were started and completed during the fiscal year 1918-19:

 Repairs of the damage caused by the earthquakes to the Aguadilla water works.

 Improvements to the Arroyo water works.

 Improvements to Barranquitas water works.

 Improvements to Guayanilla water works.

 Repairs to streets, Bayamón.

The construction of the sewer system of Yauco, which was started in July, 1918, is practically completed.

Projects have been prepared during the year for the extension and improvements of the electric light and water works systems of Arecibo; improvements to Guayanilla water works; water supply for the insular sanatorium for tuberculous patients at Las Monjas, Rio Piedras; repairs of the distributing reservoir of Fajardo water works; electric plants for Hatillo and Vieques, and proposed extension of the city of Aguadilla to provide a settlement for the poor.

A revision was made of the estimates for the water works of Barceloneta, Carolina, Cayey, Mayaguez, Naguabo, and Santa Isabel, and for the sewer systems of Comerío, Humacao, Naguabo and Ponce.

The following projects are under preparation: Construction of the plaza and drainage works of some streets at Fajardo; street paving at Santa Isabel; and repairs to the public cistern and to the bridge over "Quebrada Mulás" creek at Vieques.

WATERWORKS.

The water supply system of Aguadilla was seriously damaged by the earthquakes of October, 1918. The main pipe from the intake to the reservoir was broken at several places near the Culebrinas River crossing and the suspension bridge which supported the pipe over this river at this point was destroyed when the tower on the Aguadilla side of the river was displaced 253 centimeters (nearly 100 inches) toward the Aguada side, causing more breaks in the main. In order to resume the service as soon as possible, a temporary connection was made over the wooden bridge of the "Central Coloso" downstream from the suspension bridge, which was reconstructed later, using the same towers in the position in which they were left by the action of the earthquake. This work was done by administration at a cost of \$1,905.72, the expenses being paid from a special fund advanced by the governor. The aforesaid amount includes the cost of extra pipes and other spare material stored at Aguadilla for future needs.

The electric motor of the pumping plant of Arroyo water works, which was installed without a no-voltage relief coil, contrary to the recommendations of this office, was burned out and as the gasoline motor was giving an unsatisfactory service, it became necessary to repair both motors and pumps and reinstall the pipe lines in the pump house. This work was done by administration under the direction of chief mechanic of the bureau of public works, at a cost of \$969.60.

On account of a prolonged drought last summer, the flow of the "Torrecillas" creek, which supplies the town of Barranquitas, was so low that it was not sufficient for the needs of the town. A new dam was built some distance downstream from the old dam so that the flow of another small creek could be turned into the main distributing reservoir for the town. The necessary pipe line was installed so that the main reservoir could be supplied from either dam and the small reservoir for the higher part of the town could be supplied from the upper dam. This work was done by administration under the direction of the assistant engineer of this division at a cost of \$487.72.

The pumps and gasoline motors of the water works of Guayanilla had deteriorated to such an extent that it was impossible to pump water to the reservoir and the pumping was done directly to the mains, giving an intermittent service during six hours every day. The necessary improvements which included the installation of a new oil motor, the repair of one of the gasoline motors and the two pumps, and a new belt transmission by means of a countershaft, were quickly projected by this office and carried out by administration at a cost of \$2,200,000.

The water works of Arecibo are giving a very poor service and this office has prepared a project for improving and extending the system as well as the municipal hydroelectric plant, as the energy for both services is developed by the same turbines.

The proposed works include the construction of a new dam located about a kilometer upstream from the old one, a pipe line 1,600 meters long to feed two new 550 horsepower turbines direct connected to 400 K. V. A. 6,600-volt three-phase generators; reconstruction of the transmission and distribution systems, new reservoir of 3,000,000 liters capacity, and a 12-inch main pipe for the water supply at the city.

The project for the water supply of the insular sanatorium for tuberculous patients at Las Monjas, Rio Piedras, comprises the installation of a pipe line from Rio Piedras to the sanatorium, taking the water from the San Juan water mains.

The estimates for the other waterworks were revised at the request of the municipal authorities in each case, in order to know the probable present cost of works projected several years ago under different market conditions.

SEWER SYSTEMS.

Besides the system under construction at Yauco, already mentioned, work was started during the last week of June on the Rio Piedras sewer system, contracted for \$39,073.05. The old project for the sewer system of Ponce was revised and the necessary data was collected for designing the storm-water sewer for the hilly section on the northeast of the city which was not included in the first project. The work on this project is at a standstill, pending the receipt of the necessary data to be furnished by the municipal authorities, regarding the paving project linked with the

sewer project. In the other sewer projects mentioned above, the work of this office has been limited to revising old estimates to adjust them to present market conditions.

ELECTRIC LIGHT SYSTEMS.

The construction of a distributing system for the town of Arroyo with electric energy supplied by the Carite hydroelectric plant was completed this year by administration at a cost of \$5,368.33.

The proposed improvements to the electric plant of Arrecibo are included with the improvements to the waterworks and described under the section corresponding to waterworks.

The projects for Viequez and Hatillo comprise small direct-current plants operated by oil motors.

CITY PLANNING.

During this fiscal year a project was prepared for a settlement to relieve the situation of the poor people of Aguadilla whose houses were destroyed by a tidal wave immediately after the earthquake occurred in the morning of October 11, 1918. The plot selected is located between Progreso Street and the sea, and is limited by Sol Street on the north and Pueblo Nuevo on the south. It is near the railroad station and near the warehouses of the Playa, where the activities of the working people of Aguadilla are concentrated and close to the sewer and water lines of the city systems, which can very easily be extended to the new settlement. The project includes the opening, grading, and to a certain extent the paving of the streets and the installation of a water supply and sewer system.

Immediately after the earthquake a relief committee known as "Comité Pro-Aguadilla" was organized by citizens of Aguadilla for the purpose of distributing the funds donated to help the homeless people. From the start it was decided to provide the people with houses if the necessary funds could be raised. The legislature met in special session and passed an act entitled "An act to continue in force the provisions of an act entitled 'An act to provide additional revenues for the people of Porto Rico, through the levying of certain additional income taxes, and for other purposes,' approved December 4, 1917, for the purposes of reconstructing the insular buildings and aiding the municipalities, school boards, and private persons in the reconstruction of buildings that have been damaged by reason of recent earthquakes; to create a board; to authorize the Governor of Puerto Rico to borrow certain amounts; and for other purposes," was enacted and approved on December 12, 1918. Among the appropriations authorized by this act was one amounting to \$60,000 "for aiding poor persons who by reason of the earthquake shall have lost either partially or totally their homes, the value of the repair or construction of which shall not exceed \$250 in each case." A short time afterwards a meeting was held at the governor's palace, the governor, the commissioner of the interior, and representatives of the American Red Cross and of the "Comité Pro-Aguadilla" being present, and it was decided to undertake the work in accordance with preliminary plans prepared by this division and by the division of public buildings. It is intended to build a separate small house for each family, with sanitary installation for every four houses, in preference to the less expensive plan of tenement houses, as it is believed that the moral conditions of the poor people will be improved if each family is given a separate house, so that each one may enjoy real homelike commodities, in a certain measure, limited as we are by the small amount of money at our disposal. The proposed work will be paid from private funds obtained by donations and controlled by the governor and the "Comité Pro-Aguadilla" from funds offered by the American Red Cross and from the money appropriated by the legislature. The "Comité Pro-Aguadilla" will bear the expenses to be incurred in obtaining the necessary land; the Red Cross has contributed the sum of \$5,000 towards the expense of opening the streets and installing the sewerage and water supply systems; and the houses, which have been ordered from the United States, will be paid from the private funds controlled by the governor and from the appropriation authorized by the legislature, using the private funds to supplement the government funds, because we are limited by law to an expenditure of \$250 only for each house, and under present conditions the cost will be about \$350.

The work on this important construction will start very soon, as nearly all the land has been obtained, and with the money on hand it is expected that the street work will be completed and 231 houses erected.

As this will be the first settlement for the poor, or rather for the workingmen, to be built in Puerto Rico, and great hopes are placed on the success of this experiment, it has been considered appropriate to treat the matter thus fully.

EXPENDITURES.

The expenses of this division charged out to municipalities during the present fiscal year 1918-19 are as follows:

Salaries (engineering and inspection).....	\$3,200.58
Traveling expenses and per diem.....	1,061.40
Stationery, telegrams, etc.....	478.17
Total.....	4,739.15

The following is the total cost of the various projects begun prior to June 30, 1918, and completed during the present fiscal year 1918-19:

Diversion of the "Quebrada Mameyes" Creek in Ponce.....	\$9,653.53
Paving of the streets around the plazas "Degatau" and "Muñoz Rivera," Ponce.....	18,719.96
Construction of an electric-distributing system for Arroyo.....	5,368.33
Total.....	33,741.82

The total cost of construction of the projects begun and completed during this fiscal year (1918-19) is as follows:

Repairs to Aguadilla waterworks.....	\$1,905.72
Improvements to Arroyo waterworks.....	989.60
Improvements to Barranquitas waterworks.....	487.72
Repairs to Bayamon streets.....	516.03
Improvements to Guayanilla waterworks.....	2,300.00
Total.....	6,079.07

The amount paid on the construction of the Yauco sewerage system, which was started during the year and is nearly completed, is \$29,831.72.

The following projects were prepared during the fiscal year 1918-19:

Aguadilla, ¹ project for settlement for the poor.....	\$5,000.00
Arecibo, ¹ project for improvements and extension to the waterworks and electric light systems.....	300,000.00
Barceloneta, revision of estimate for construction of waterworks.....	26,000.00
Carolina, revision of estimate for construction of waterworks.....	49,500.00
Cayey, estimate for new intake from "Quebrada Culebras" Creek.....	62,000.00
Comerio, revision of estimate for the construction of a sewer system.....	16,000.00
Fajardo, ¹ project for repairs to distributing reservoir of waterworks.....	330.00
Guayanilla, ² project for improvements to waterworks.....	2,200.00
Hatillo, ¹ project for electric plant.....	7,750.00
Humacao, revision of estimate for construction of sewer system.....	40,000.00
Mayaguez, ¹ revision of estimate for improvements to waterworks.....	330,000.00
Naguabo, revision of estimate for construction of waterworks.....	65,000.00
Naguabo, revision of estimate for construction of sewer system.....	22,500.00
Ponce, revision of estimate for construction of sewer system.....	261,197.00
Ponce, preliminary project for storm-water sewer.....	102,430.00
Rio Piedras, project for construction of water supply for the insular sanatorium for tuberculous patients.....	13,400.00
Santa Isabel, revision of estimate for construction of waterworks.....	32,500.00
Vieques, ¹ project for electric plant.....	15,153.72
Total.....	1,350,960.72

The average cost of preparation of projects for the different municipalities, including field expenses in connection with said projects, has been as follows:

Estimated cost of work.	Per cent cost of project to estimated cost.	Estimated cost of work.	Per cent cost of project to estimated cost.
Up to \$5,000.....	2.40	\$30,000 to \$50,000.....	1.06
\$5,000 to \$15,000.....	1.70	\$50,000 to \$100,000.....	1.04
\$15,000 to \$30,000.....	1.20	\$100,000 to \$300,000.....	.34

¹ Projects to be carried out soon, as there are available funds for the work.

² This work was completed during this fiscal year 1918-19.

Activities of the division of municipal works.

Fiscal year.	Cost of construction work done during the year.	Estimated cost of projects prepared or revised.	Fiscal year.	Cost of construction work done during the year.	Estimated cost of projects prepared or revised.
1911-12.....	\$13,173.80	\$510,800.00	1916-17.....	\$60,062.79	\$68,041.22
1912-13.....	215,189.69	844,000.00	1917-18.....	49,612.78	203,230.80
1913-14.....	178,194.17	471,331.00	1918-19.....	69,652.61	1,350,900.72
1914-15.....	59,361.88	245,899.25			
1915-16.....	283,780.57	176,303.05	Total.....	913,431.20	.....

Plans, specifications, etc., for the following works were completed prior to June 30, 1919, but no construction work has been started yet:

Town.	Job.	Estimated cost.	Estimate made.
Adjuntas.....	Waterworks.....	\$18,000.00	1911-12
Aguada.....	do.....	27,800.00	1913-14
Anguas Buenas.....	do.....	14,900.00	1916-17
Albionito.....	Sewer system.....	25,000.00	1913-13
Anasco.....	Waterworks.....	35,000.00	1913-14
Arecibo.....	Improvements to waterworks and electric plant.....	300,000.00	1918-19
Barceloneta.....	Waterworks.....	26,000.00	1918-19
Bayamon.....	Sewer system.....	45,800.00	1916-17
Do.....	Waterworks.....	180,000.00	1913-13
Caguas.....	Improvements to filtration ditches.....	863.08	1916-17
Carolina.....	Waterworks.....	49,500.00	1918-19
Cidra.....	do.....	16,000.00	1915-16
Comerio.....	Improvements to waterworks.....	600.00	1917-18
Do.....	Sewer system.....	16,000.00	1918-19
Fajardo.....	Fajardo River deviation.....	4,000.00	1914-15
Do.....	Repairs to waterworks reservoir.....	330.00	1918-19
Gurabo.....	Sewer system.....	12,769.18	1911-12
Do.....	Street paving.....	2,200.00	1917-18
Hatillo.....	Waterworks.....	11,625.00	1913-14
Do.....	Sewer system.....	8,987.76	1914-15
Do.....	Electric plant.....	7,750.00	1918-19
Humacao.....	Sewer system.....	40,000.00	1918-19
Juana Diaz.....	New waterworks.....	50,000.00	1915-16
Do.....	Old waterworks.....	12,348.92	1911-12
Lajas.....	Waterworks.....	19,000.00	1913-14
Loia.....	do.....	36,800.00	1915-16
Do.....	Sewer system.....	16,846.00	1916-16
Manati.....	Waterworks.....	80,000.00	1912-13
Mayaguez.....	Improvements to waterworks.....	330,000.00	1918-19
Morovis.....	do.....	14,770.00	1913-14
Naguabo.....	do.....	65,000.00	1918-19
Do.....	Sewer system.....	22,600.00	1918-19
Do.....	Santiago River deviation.....	17,823.75	1914-15
Patillas.....	Waterworks.....	13,270.00	1913-14
Do.....	Electric lighting.....	5,500.00	1917-18
Ponce.....	Improvements to waterworks.....	55,000.00	1911-12
Do.....	Sewer system.....	261,197.19	1918-19
Do.....	Street paving.....	100,000.00	1912-13
Sabana Grande.....	Waterworks.....	35,635.00	1913-14
Salinas.....	Sewer system.....	18,400.00	1913-14
San Sebastian.....	Waterworks.....	33,570.00	1913-14
Santa Isabel.....	do.....	32,500.00	1918-19
Do.....	Sewer system.....	12,711.00	1913-14
San German.....	Waterworks.....	77,709.63	1913-14
Vieques.....	Electric plant.....	15,183.74	1918-19
Yabucoa.....	Sewer system.....	19,280.00	1913-14
Total cost of projects pending construction.		2,188,701.17	

On account of the constant increase in the cost of material and labor, it will be necessary to revise the estimates for these projects before any work is undertaken, as many of them were prepared as far back as 1911.

Besides attending to the aforesaid work, which may be considered within the exclusive scope of action of this division, the engineer in charge of municipal works has passed upon projects and made investigations requested of this department by the

executive council, the public-service commission, and other dependencies of the insular government. During the earthquake period he also inspected many buildings at Aguadilla, Aibonito, Arecibo, and Utuado, rendering the corresponding reports regarding their condition as to safety.

The following matters and projects have been investigated and passed upon by the division of municipal works during the fiscal year 1918-19:

Project of hydroelectric plant at Ciales; Mr. Vicente Martínez Reventós grantee of the franchise.	Project of auxiliary power plant for the municipality of Arecibo.
Project of distributing system of electric energy in Coamo; Mr. Ramón Gandía Córdova grantee of the franchise.	Investigation of rates of Arecibo municipal electric plant.
Project of hydroelectric plant at Guayanilla; Mr. Alejandro Franceschi grantee of the franchise.	Project of extension of the street railway lines in Ponce.
Project of distributing system of electric energy in Juana Díaz; Mr. Ramón Gandía Córdova grantee of the franchise.	Investigation of the conditions of the distributing lines of the Porto Rico Railway, Light & Power Co. in San Juan.
Project for using hydraulic power for the electric plant at Maricao; Mr. José Antonio Caparrós grantee of the franchise.	Investigation of the electric distribution losses in the municipal systems of Guayama and Arroyo.
Inspection of the hydroelectric plant at Morovis; Mr. Arthur Guerra grantee of the franchise.	Inspection and appraisal of the machinery, lines, and buildings of the Porto Rico Railway, Light & Power Co., at the request of the treasurer of Porto Rico.
Inspection and appraisal of the electric plant at Anasco; Mr. Gabino Balasquide grantee of the franchise.	Determining unit prices for the appraisal of railroad lines and rolling stock of the corporations, at the request of the treasurer of Porto Rico.

It has been shown that the services rendered to the municipalities by this division are very valuable, as it does practically all the work the municipalities wish to undertake in the planning and building of sewer systems, waterworks, electric lighting, street paving, and other improvements. Although with present market conditions the prices of material and labor are raising instead of lowering the cost of all construction work, a greater activity is expected next fiscal year, because the new municipal law allows the municipalities greater facilities for making loans, as the municipal assembly will have power to impose additional taxes without submitting its decision to a general assembly of taxpayers as provided for in the old municipal law.

DIVISION OF PUBLIC LANDS AND ARCHIVES.

HISTORICAL RÉSUMÉ.

All lands in the island of Porto Rico originally belonged to the Crown of Spain as a result of the discovery of the island by Columbus in the year 1493.

All efforts made to find in the public archives any documents that might show the form and manner in which said lands were administered by the Spanish Government in early times after their acquisition have proven fruitless, and reference can, therefore, be made only to an epoch not very remote, concerning which some documents have been found.

By royal decree of the 14th of January, 1778, the date which marks the origin of the right of property ownership in Porto Rico, Charles the Third, King of Spain, granted to the inhabitants of this island the ownership of all lands in exchange for the organization and maintenance on a war footing of seven battalions of the militia and three brigs and the naval forces for the same.

It is proper to call attention to the fact that at that time a royal decree of an absolute King of Spain had all the authority of a subsequent act approved by the "cortes," and said royal decree in regard to Porto Rico embodied all the solemnities of a treaty, because the grant was not gratuitous, but, on the contrary, conditions were imposed thereby on the treasury of the island which were always fulfilled. The said royal decree authorized the commanding general of Porto Rico to distribute unappropriated public lands among the inhabitants of the island under certain conditions, they reverting to the Crown in case such conditions were not complied with.

The grants of lands in the island of Porto Rico were made in the above-mentioned form until the year 1818, when, by royal decree of the 28th of December of said year, the board of distribution of unappropriated public lands was created.

In order that this board could accomplish its purpose in proper form, and as there were no surveyors in the island at that time, the Government authorized a certain number of amateurs to practice said profession in Porto Rico, for as soon as the board granted a petition for a grant of land the party interested was required to present at his cost a map of the land petitioned for. The survey should be made after giving notice to the adjoining owners, and the surveyor should express in the certificate issued by him the consent or objections of said owners and, in the last case, the reasons on which the objection was based.

Once the grant was finally approved the track of land surveyed was marked out on the ground, establishing the necessary monuments along its boundaries. The tracts granted were supposed to be rectangular in form, but, due to the imperfections of the instruments and to the improper system used at that time, the parcel of land marked out on the ground was very seldom in accordance with the description made by the surveyor in the certificate of issue. These defects, and also the multiplicity of grants made, are the real cause of the irregularity in the shapes of rural properties in Porto Rico.

This board of distribution of unappropriated public lands was in existence until the year 1876, when, by royal decree of the 3d of February of the same year the propriety of abolishing it was suggested as in accordance with royal decree No. 61 of January 27, 1876, no more gratuitous grants of lands by the Government could be made in Porto Rico.

Quite a large area of land in various parts of the island remained unallotted, this being retained as the property of the Crown of Spain.

In the following tables an account is given of the geographical distribution, areas, etc., of the lands owned by the government:

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain as they appear in the archives of this department and which by virtue of the treaty of peace signed at Paris on the 10th day of December, 1898, were ceded to the United States of America and now belong to the Government of Porto Rico by virtue of a law of Congress approved July 1, 1902, with the exception of those reserved by the several proclamations of the President for Federal uses.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
				<i>Acres.</i>	
1	Adjuntas.....	Saltillo.....	200.00	Good for cotton, fruits and lumber.
2	do.....	Tanama.....	100.00	Do.
3	Aguas Buenas.....	Mulas.....	40.00	Good for fruits.
4	do.....	Bayamondito.....	100.00	Do.
5	Albionito.....	Guyon.....	615.00	Unknown.
6	do.....	Robles.....	200.00	Good for cotton, fruits, and lumber.
7	do.....	do.....	200.00	Good for fruits and lumber.
8	Añasco.....	Boca del Rio.....	.....	Unknown.
9	Arecibo.....	Hato Viejo.....	200.00	Good for sugar cane.
10	do.....	do.....	100.00	Unknown.
11	do.....	Esperanza.....	200.00	Good for fruits and lumber.
12	Cafío o Laguna de los Tiburones (surveyed).	do.....	Cambalache Sta. Ana Isote factor y Garrochales.	4,205.00	Good for sugar cane.
13	do.....	Esperanza Santa Rosa.	2,142.00	Good for coffee and vegetables.
14	(Surveyed).....	Barros.....	Orocovis.....	10.00	Good for fruits.
15	do.....	Cacaos.....	100.00	Good for cotton and lumber.
16	(Surveyed).....	do.....	do.....	121.00	Good for fruits.
17	do.....	do.....	60.00	Do.
18	do.....	Bauta Abajo.....	300.00	Unknown.
19	do.....	do.....	100.00	Good for fruits and lumber.
20	do.....	do.....	300.00	Unknown.
21	do.....	Piedra o Cacos.....	50.00	Do.
22	do.....	Dña. Juana y Cacos.....	100.00	Good for fruits.
23	do.....	Cacaos.....	100.00	Do.
24	do.....	Bauta Abajo.....	2.00	Do.
25	do.....	do.....	52.00	Do.
26	do.....	Damian Abajo.....	25.00	Do.
27	do.....	Sabana.....	10.00	Do.
28	do.....	Bermejales y Bauta.....	200.00	Good for fruits and lumber.
29	do.....	Damian.....	30.00	Good for fruits and cotton.
30	do.....	Bauta Abajo.....	600.00	Unknown.
31	do.....	Cacaos.....	50.00	Good for fruits.
32	do.....	do.....	100.00	Good for fruits and lumber.
33	do.....	do.....	.....	Unknown.
34	do.....	Bauta.....	200.00	Good for fruits cotton and lumber.
35	do.....	Bauta Abajo.....	.....	Unknown.
36	do.....	do.....	.....	Do.
37	do.....	Mata de Caña.....	22.00	Good for fruits.
38	do.....	do.....	118.00	Good for fruits, cotton, and lumber.

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
				<i>Acres.</i>	
39		Barros	Ortiga	457.66	Unknown.
40		do.	Matrillas	64.51	Good for fruits.
41		do.	Bauta Abajo	170.00	Good for fruits and lumber.
42		do.	do.	125.00	Unknown.
43		do.	Colindando con Ciales Utuado y Juana Diaz.		These lands contain 15 parcels good for cotton and vegetables.
44		Bayamon	Hato Teja		Unknown.
45		do.	Pueblo Viejo		Good for lumber.
46		do.	Sta. Olaya	254.40	Good for cotton, fruits, and lumber.
47	(Measured)	do.	Cataño, sur del poblado	30.00	Lots for houses.
48		do.	Guaragua	70.00	Good for fruits.
49		do.	Guaragua o Sta. Olaya	200.00	Unknown.
50		do.	Palmas, Bo. Poyales	705.68	If drained, good for sugar cane.
51		do.	do.		Unknown.
52		Barceloneta	Florida Adentro	50.00	Good for fruits.
53	Part of the Cano or Laguna de los Tiburones (measured).		Palmas Altas		If drained, good for sugar cane.
54		Barceloneta	Florida Afuera	350.00	Good for cotton, fruits, and lumber.
55		Cabo Rojo	Boqueron Poyales	300.00	If drained, good for sugar cane.
56	Salina Cande	do.	Boqueon y Llano	267.00	Salt deposit.
57	Salina Laguna	do.	do.		Do.
58	Salina Consuelo	do.	Pedernales		Do.
59		do.	Guanaibito	15.00	If drained, good for sugar cane.
60		do.	Boqueron y Placres		Unknown.
61		do.	Miradero	16.00	Good for fruits.
62	Salina Caborrojeña	do.		967.00	Salt deposit.
63		do.	Jayuya, Guanajibo, Miradero y Boqueron.		Unknown.
64		do.	Guanajibo	15.00	Good for pineapples.
65		Caguas	Beatriz, lmites de Cayey, Guayama y Hato Grande.		Unknown.
66		Camuy	Quebrada	66.00	Good for fruits.
67		do.	Quebrada	1,200.00	Unknown.
68		Cayey	Guavate-Monte Santana.	500.75	Good for fruits, cotton, and lumber.
69		do.	Farallon, Cuchilla del Pelado.		Unknown.
70		do.	Jajome Alto	406.04	Good for fruits, cotton, and lumber.
71		do.	Jajome Bajo	141.93	Good for fruits and lumber.
72		do.	Sitio del Cercadillo		Unknown.
73		Ceiba	Guayacan	230.00	Good for fruits and lumber.
74		do.	Rio Arriba	4,561.50	Do.
75		do.	do.	89.50	Good for fruits.
76		do.	do.	534.50	Good for fruits and lumber.
77		do.	Islote de Cabra de Afuera.	97.75	Do.
78		do.	Islote Garza Cayo, proximo al puerto.	10.00	Good for lumber.
79		Ciales	Pozas	400.00	Good for fruits and lumber.
80		do.	Hato Viejo	80.00	Good for lumber.
81		do.	do.	200.00	Good for fruits, cotton, and lumber.
82		do.	do.	200.00	Do.
83		do.	do.	25.00	Good for fruits and cotton.
84		do.	Toro Negro	34.00	Do.
85		do.	Fronton	180.00	Good for fruits, cotton, and lumber.
86		do.	Cialitos	60.00	Good for fruits and cotton.
87		do.	Toro Negro	100.00	Good for fruits and lumber.

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
				<i>Acres.</i>	
88	Ciales	Toro Negro	39.93	Good for cotton and fruits.
89	do.	Hato Viejo Monte Arroyo.	891.25	Good for fruits, cotton, and lumber.
90	do.	Cordillera Cimarrones	535.64	Do.
91	do.	Fronton Sumidero	892.61	Good for fruits and lumber.
92	do.	Toro Negro	1,249.75	Good for fruits, cotton, and lumber.
93	do.	Pozas, Zanjones	891.25	Good for fruits and lumber.
94	do.	Cialitos	714.09	Unknown.
95	do.	Toro Negro	34.25	Good for fruits and cotton.
96	do.	do.	66.25	Do.
97	do.	Yaguas	14.00	Do.
98	do.	Toro Negro	92.00	Do.
99	do.	do.	88.00	Do.
100	do.	do.	34.00	Do.
101	do.	do.	11.00	Do.
102	do.	do.	58.00	Do.
103	do.	Hato Viejo	25.00	Do.
104	Cidra	Honduras	.....	Unknown.
105	Coamo	Llanos	1.00	One parcel.
106	do.	Cuyon Jacana	140.00	Good for fruits and lumber.
107	do.	Pedro Garcia	20.00	Good for fruits.
108	do.	Llanos	.....	Unknown.
109	do.	Pastos	.....	Do.
110	Corozal	Abras	35.00	Good for fruits.
111	do.	do.	10.00	Do.
112	do.	Jacinto, Mucilagima	18.00	Do.
113	do.	Cibuco	332.00	Unknown.
114	Dorado	.....	353.33	If drained, good for sugar cane.
115	Fajardo	Quebrada	96.00	Good for fruits.
116	do.	Cabezas	150.00	Good for fruits and lumber.
117	do.	Rio Arriba Cuchilla de Palo Quemado.	713.25	Unknown.
118	do.	Rio Abajo Sierra Luquillo.	.....	Do.
119	do.	Islote Cabeza de Perro o Farallon.	.....	Good for fruits and lumber.
120	do.	Guayacan	.....	Do.
121	do.	Islote Indio, Islote Frio	.....	Do.
122	do.	Islote Rosa	.....	Do.
123	do.	Islote ma pequeño.	.....	Good for lumber.
124	do.	Quebrada	200.00	Unknown.
125	do.	Luquillo Sabana	200.00	Do.
126	do.	Cabezas de San Juan	45.44	Good for fruits and lumber.
127	Guayama	Jobos, Aguirre	100.00	Do.
128	do.	Jobos	100.00	Do.
129	do.	Carite	1,017.00	Do.
130	do.	Islote Carite	20.00	Good for lumber.
131	Salina Clandestina	do.	Jobos	.....	Salt deposit.
132	(Measured)	Guayanilla	Susua y Boca Cerro Barraco.	502.14	Good for fruits and lumber.
133	do.	Cerro Crillo	800.00	Good for lumber.
134	do.	Pasto, Sierra de Guilarte.	1,139.00	Good for fruits and lumber.
135	do.	Sierra Jagua	200.09	Unknown.
136	do.	Jagua	35.00	Do.
137	do.	Indios	1,600.00	Good for lumber.
138	Guayanilla	Jagua del	200.00	Unknown.
139	Guarabo	Yagual	8.00	Good for fruits.
140	Hatillo	Bayaney	1.50	Do.
141	Hato Grande	Espino	280.00	Unknown.
142	do.	do.	600.00	Do.
143	Humacao	Barrio del Rio	4,579.00	Good for fruits and lumber.
144	(Measured)	Isabela	Arenales	400.00	Good for fruits, cotton, and lumber.
145	Juana Diaz	Collares	50.00	Good for fruits.
146	do.	Costa	145.00	Unknown.
147	do.	Islote Berberia	30.00	Good for lumber.
148	do.	Guayabal	200.00	Unknown.

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
				<i>Acres.</i>	
149	Juana Díaz	Collores	100.00	Good for fruits and lumber.
150	do.	do.	50.00	Good for fruits and cotton.
151	do.	Los Fondos	50.00	Unknown.
152	do.	Collores	50.00	Do.
153	(Measured)	do.	Guayabal	400.00	Do.
154	do.	do.	do.	150.00	Good for fruits and lumber.
155	do.	Collores	100.00	Unknown.
156	do.	Villalba Arriba	100.00	Do.
157	do.	do.	189.53	Good for fruits, cotton, and lumber.
158	do.	do.	184.00	Good for fruits and lumber.
159	do.	do.	100.00	Unknown.
160	do.	Caonillas Arriba	150.00	Do.
161	Mina de Hierro, el F. C.	do.	do.	.....	Mineral deposit.
162	do.	Villalba Arriba	5.00	Good for fruits.
163	Lajas	Parguera y Palmarejo	692.00	If drained, good for sugar cane.
164	(Measured)	do.	Puerto Pasaje	70.00	Unknown.
165	Salitral	do.	Costa	70.00	Do.
166	do.	La Parguera	100.00	Salt deposit.
167	Lares	Piletas	4,133.00	Good for fruits and lumber.
168	Loísa	Sierra de Luquillo	1,272.00	Good for fruits, cotton, and lumber.
169	do.	Hato Puerco	50.00	Good for fruits and cotton.
170	do.	do.	126.00	Good for fruits and lumber.
171	do.	do.	.....	Unknown.
172	do.	Torrecillas Los Frailes	.....	Good for sugar cane.
173	do.	Cubuy	80.00	Good for fruits and grass.
174	(Measured)	do.	do.	600.00	Good for fruits, cotton, and lumber.
175	Luquillo	Pitajaya	891.00	Unknown.
176	do.	Sabana	723.50	Do.
177	do.	Mameyes	723.50	Do.
178	do.	Sierra de Luquillo	5,063.00	Good for lumber.
179	do.	Sabana	300.00	Unknown.
180	do.	do.	71.00	Do.
181	do.	do.	206.00	Good for fruits and lumber.
182	do.	do.	395.00	Unknown.
183	do.	Mameyes	600.00	Do.
184	Manatí	Bajura	16.00	Good for vegetables.
185	do.	do.	25.00	Do.
186	Part of the Cano or Laguna de los Tiburones (measured).	do.	Garrochales and Palmas Atlas	.....	If drained, good for sugar cane.
187	do.	Florida	20.25	Good for fruits.
188	do.	Bajura	16.00	Good for cane.
189	do.	do.	25.00	Do.
190	do.	Río Arriba	100.00	Unknown.
191	do.	Garrochales or Palmas Altas	100.00	If drained, good for sugar cane.
192	do.	Coto	.....	Unknown.
193	do.	Río Arriba	180.00	Good for fruits and lumber.
194	do.	Coto, Bajura	400.00	Unknown.
195	Maricao	Maricao Afuera	500.00	Do.
196	do.	do.	1,000.00	Good for fruits and lumber.
197	do.	do.	699.75	Unknown.
198	do.	do.	599.79	Do.
199	do.	Indiera Baja	250.00	Good for fruits.
200	Mayaguez	Miradero	223.00	Do.
201	do.	do.	8.00	Do.
202	Los Oficiales	do.	Quemado	2,000.00	Good for fibrous plants and grass.
203	Naguabo	Pena Pobre Tributo	35.00	Good for fruits.
204	do.	Algodones, Pta. Lima	275.00	Good for fruits and lumber.
205	do.	Pena Pobre	714.00	Do.

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
				<i>Acres.</i>	
206	Naguabo.....	Sierra Luquillo Rio Blanco.	1,785.25	Unknown.
207	do.....	Daguam, Cano Prieto, Queda Palma y Botija.	180.00	Do.
208	do.....	Rio Blanco.....	259.00	Do.
209	do.....	do.....	150.00	Good for fruits and lumber.
210	do.....	Pena Pobre.....	35.00	Unknown.
211	do.....	do.....	100.00	Do.
212	Naranjito.....	Cedro Arriba.....	48.00	Good for fruits.
213	do.....	Cedro.....	48.00	Do.
214	Patillas.....	Rio Real.....	500.00	Unknown.
215	do.....	do.....	200.00	Do.
216	do.....	Mulas, Cuchilla del Pelado.	900.00	Do.
217	do.....	Mulas.....	100.00	Good for fruits and cotton.
218	do.....	Palmas.....	208.00	Good for fruits and lumber.
219	do.....	Real.....	800.00	Unknown.
220	do.....	Mulas.....	800.00	Do.
221	do.....	Apeadero.....	18.00	Do.
222	do.....	Mulas.....	550.00	Good for fruits and lumber.
223	do.....	Mulas Quedillas.....	200.00	Good for cotton and fruits.
224	do.....	Rio Arriba.....	300.00	Unknown.
225	do.....	Mulas.....	100.00	Good for fruits.
226	do.....	Real.....	500.00	Unknown.
227	do.....	Mulas.....	Do.	Do.
228	do.....	Real.....	100.00	Good for cotton and fruits.
229	do.....	Rio Arriba.....	20.00	Unknown.
230	do.....	Real.....	1.00	Do.
231	do.....	do.....	99.00	Good for fruits.
232	do.....	Rio Arriba.....	49.00	Unknown.
233	do.....	Real.....	51.00	Do.
234	Penuelas.....	Tallaboa.....	50.00	Do.
235	do.....	Islote, Caribe.....	Do.	Good for fruits and lumber.
236	do.....	Parguera.....	20.25	Do.
237	do.....	Rucio, Cerrote.....	160.00	Do.
238	do.....	Tallaboa.....	443.00	Unknown.
239	Las Piedras.....	Rio.....	400.00	Good for fruits and lumber.
240	do.....	Sierra de Luquillo.....	4,518.00	Good for fruits, cotton, and lumber.
241	Ponce.....	Isla de Cajax de Muerto.	190.75	Good for fruits and lumber.
242	do.....	Quebrada del Agua.....	40.00	Good for pineapples and lumber.
243	do.....	Penon.....	10.75	Good for lumber.
244	do.....	San Patricio.....	80.50	Good for fruits and cotton.
245	do.....	do.....	92.00	Do.
246	do.....	do.....	138.00	Good for fruits and lumber.
247	do.....	do.....	100.00	Good for fruits, cotton, and lumber.
248	Salina Gasosa.....	do.....	do.....	Do.	Salt deposit.
249	do.....	Canas, Isla Ratones.....	Do.	Good for lumber.
250	do.....	Tibes.....	Do.	Unknown.
251	do.....	Guaraguao.....	Do.	Do.
252	Salina la Poncena.....	do.....	do.....	Do.	Salt deposit.
253	Salina Perseverancia.....	do.....	do.....	Do.	Do.
254	Quebradillas.....	Guajataca.....	500.00	Good for cotton, fruits, and lumber.
255	Rio Grande.....	Guzman.....	4,430.00	Good for fruits and lumber.
256	do.....	Guzman Lazaro.....	4,462.00	Unknown.
257	do.....	Guzman Yunque.....	3,307.00	Good for fruits and lumber.
258	do.....	Jimenez.....	3,570.00	Good for fruits, cotton, and lumber.
259	do.....	do.....	400.00	Do.
260	do.....	Guzman Arriba.....	108.00	Good for fruits and lumber.
261	do.....	Jimenez.....	200.00	Unknown.

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
262		Rio Grande	Guzman Arriba	<i>Acres.</i> 200.00	Unknown.
263		do.	do.	500.00	Do.
264		do.	Jimenez	400.00	Do.
265		do.	Guzman Arriba		
266		do.	do.	64.17	Good for fruits.
267	America, mina de oro y plata.	do.	Mameyes		Mining claims.
268		do.	Guzman	211.00	Good for fruits.
269		do.	do.	313.00	Unknown.
270		do.	do.	292.43	Do.
271		do.	Jimenez	400.00	Good for fruits and lumber.
272		do.	Guzman	200.00	Do.
273		do.	Guzman Arriba	335.00	Good for fruits.
274		do.	do.	200.00	Unknown.
275	(Measured)	Rio Piedras	Hato-Rey	70.00	Agricultural school.
276		do.	Anon	1,660.00	Unknown.
277		do.	Monacillos	400.00	Good for fruits and sugar cane.
278		do.	Hato Rey		Do.
279		do.	Monacillos	60.00	Do.
280		do.	Rosario		Unknown.
281		Sabana Grande	Santana	190.00	Do.
282		do.	Rincon	72.00	Good for cotton and fruits.
283		do.	Las Peladas Seco	2,790.25	Good for fruits and lumber.
284		do.	Tabonuco	493.50	Unknown.
285		do.	Santana	100.00	Good for fruits.
286		do.	do.	65.00	Do.
287		do.	do.		Unknown.
288		do.	Sta. Ana	81.84	Good for fruits.
289		Salinas	Lapa	90.00	Good for fruits and lumber.
290		do.	do.	310.75	Do.
291		do.	Queda, Yeguas	357.25	Do.
292		do.	Queda, Yeguas, Cerro Aponte	200.00	Unknown.
293		do.	Rio Jueyes	100.00	Do.
294		do.	Lapa	98.99	Good for fruits.
295		do.	do.	40.00	Do.
296		do.	do.	6.45	Do.
297		do.	do.	55.00	Do.
298		do.	Aguirre		Unknown.
299		do.	Lapa	90.00	Good for fruits.
300		do.	do.	15.80	Do.
301		do.	do.	66.00	Do.
302		do.	do.	114.95	Do.
303		do.	Potosi	340.00	Unknown.
304	Salina Asuncion	do.			Salt deposit.
305	Salina Carmen	do.			Do.
306	Salina Monserrate	do.			Do.
307		do.	Lapa	50.00	Good for fruits.
308		do.	Lapa y Queda, Yeguas	58.00	Do.
309		do.	do.	233.00	Good for fruits and lumber.
310		do.	Lapa	1,490.00	Do.
311		Salinas	Lapa y Quebrada Yeguas	48.00	Good for fruits.
312		do.	do.	240.00	Good for fruits and lumber.
313		do.	do.	7.18	Good for fruits.
314		do.	do.	15.00	Do.
315		do.	do.	14.95	Do.
316		do.	do.	14.35	Do.
317		do.	do.	233.50	Unknown.
318		do.	do.	56.00	Good for fruits.
319		San Germán	Parguera	375.00	Good for fruits and lumber.
320		do.	Costa	70.00	Good for fruits.
321		do.	Lajas Arriba	160.00	Good for fruits and lumber.
322		do.	do.	60.00	Good for fruits.
323		do.	Bucarabones	1,400.00	Unknown.
324	(Measured)	San Juan	Santurce Seboruco	127.34	Good for building construction.
325		do.	do.	16.00	Unknown.
326		do.	Santurce, Stop M.		Construction lots.
327	(Measured)	do.	Pta. de Tierra, Stop L		Do.

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
				<i>Acres.</i>	
328	San Juan.....	Pta. de Tierra, Stop H.	.....	Construction lots.
329	do.....	Santurce cienega de Cangrejos.	.....	If drained, good for building construction.
330	(Measured).....	do.....	Santurce Instituto.....	.....	Do.
331	San Sebastian.....	Cidral.....	.....	Mineral deposit.
332	(Measured).....	Sta. Isabel.....	Isiote Las Matas.....	.....	Good for lumber.
333	do.....	Caracoles.....	119.75	Good for fruits and lumber.
334	do.....	Balajó-Mangle.....	119.00	If drained, good for sugar cane.
335	do.....	Isla de Puerto.....	117.75	Do.
336	Tos Alta.....	Contorno.....	20.00	Good for fruits.
337	Tos Baja.....	Candelaria Los Pajaros.	2.50	Do.
338	Utua.....	Sta. Rosa.....	1,153.00	Good for coffee and fruits.
339	do.....	Caguana.....	105.00	Do.
340	do.....	Consejos.....	122.00	Do.
341	do.....	Angela.....	12.00	Do.
342	do.....	Jauca vivi Arriba.....	534.50	Good for coffee, fruits, and lumber.
343	do.....	Paso Palma.....	327.25	Do.
344	do.....	Jaguey Arriba.....	1,733.75	Unknown.
345	do.....	Mameyes.....	534.00	Do.
346	do.....	Don Adenso Ala del Palmer.	891.00	Do.
347	do.....	Caguana.....	21.43	Good for fruits.
348	do.....	Angeles Sumidero.....	257.75	Good for fruits and lumber.
349	do.....	Angeles.....	400.00	Unknown.
350	do.....	Norzagaray.....	400.00	Do.
351	do.....	Jayuya.....	56.00	Good for fruits.
352	do.....	Mameyes Abajo.....	400.00	Unknown.
353	do.....	do.....	60.00	Good for fruits.
354	(Measured).....	do.....	Caguana.....	300.00	Good for fruits, coffee, and lumber.
355	do.....	Vivia Arriba.....	71.25	Good for fruits.
356	do.....	Paso Palma.....	19.75	Do.
357	do.....	Jayuya.....	314.00	Good for fruits, coffee, and lumber.
358	do.....	Jayuya Arriba.....	358.00	Unknown.
359	do.....	Caguana.....	200.00	Good for coffee, fruits, and lumber.
360	do.....	do.....	111.00	Do.
361	do.....	do.....	50.00	Good for fruits.
362	do.....	do.....	100.00	Good for fruits and lumber.
363	do.....	Tetuan.....	.....	Unknown.
364	do.....	Caguana.....	100.00	Good for coffee, fruits, and lumber.
365	do.....	Caonillas.....	100.00	Good for fruits and lumber.
366	do.....	Tetuan.....	20.00	Good for fruits.
367	do.....	Arenas.....	80.00	Do.
368	do.....	Mameyes.....	31.00	Do.
369	do.....	Caguana.....	50.00	Do.
370	do.....	Paso Palma.....	70.00	Do.
371	do.....	do.....	26.00	Do.
372	do.....	Jayuya.....	19.70	Do.
373	do.....	Jauca.....	3,000.00	Unknown.
374	do.....	Tetuan.....	.....	Do.
375	do.....	Jayuya Arriba.....	62.00	Good for fruits.
376	do.....	do.....	232.00	Good for fruits and lumber.
377	do.....	do.....	.....	Unknown.
378	(Measured).....	do.....	Caguana.....	1,511.26	Good for coffee, fruits, and lumber.
379	do.....	Norzagaray.....	166.00	Do.
380	do.....	do.....	383.00	Do.
381	do.....	do.....	158.00	Do.
382	do.....	do.....	546.00	Good for coffee and fruits.
383	do.....	do.....	110.00	Do.
384	do.....	Paso Palma.....	93.00	Do.
385	do.....	Mameyes y Tetuan.....	1.00	Good for fruits.
386	do.....	Paso Palma.....	100.14	Do.
387	do.....	do.....	89.19	Do.

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

File No.	Name of property.	Town.	Ward.	Area.	Nature of land.
				<i>Acres.</i>	
388		Utuaño.	Paso Palma	109.58	Good for fruits.
389		do.	do.	10.11	Do.
390		do.	do.	64.42	Do.
391		do.	Jauca y Toro Negro	315.28	Good for coffee, fruits, and lumber.
392		do.	Saliente	173.00	Do.
393		Vega Baja	Pugnado	800.00	Unknown.
394		do.	Pugna do Adentro	30.00	Good for fruits.
396		Vieques.	Puerto Diablo Cayo Carenero.	200.00	Good for fruits and lumber.
396		do.	Cayo de Afuera	17.28	Do.
397		do.	Cayo de Tierra	24.47	Good for fruits, lumber, and grass.
398		do.	Manuel Kiff	11.25	Do.
399		do.	Cayo de Chiva	.46	Good for lumber.
400		do.	Pta. Arenas Cerro Piratas.	891.00	Good for fruits and lumber.
401		do.	Cayo Real	27.00	Do.
402		do.	Cayo Carenero.		Do.
408		do.	Cayo Verdiales		Good for lumber.
404		do.	Pto. Real	75.00	Good for fruits and lumber.
405		do.	Pto. Diablo	220.00	Unknown.
406		do.	Campaña	207.00	Do.
407		Yauco.	Naranjos	12.00	Good for fruits.
678		do.	Rio Prieto	108.00	Do.
409		do.	Montalva	18.00	Good for fruits and lumber.
410	La Laguna	do.	Guanica	1,200.00	If drained, good for sugar cane.
411		do.	Frailes, Las Peladas		Good for fruits and lumber.
412		do.	Rancheras, Piedras G. Gordas.		Do.
413		do.	Almacigo, Quebrada Fria.		Unknown.
414	Salina Comunidad	do.			Salt deposit.
415	Salina Salineta	do.			Do.
416	Salina Escolmugada	do.			Do.
417	Salina Corral	do.			Do.
418	(Measured)	do.	Guanica	72.50	Good for fruits.
419	do.	do.	Guanica, Boca Barina Alta Collores, Maniel y Cohanas.	5,332.64	Good for vegetables and lumber.
420		Yabucoa	Guayabota	46.00	Good for fruits.
421		do.	Pandura		Unknown.
422		Isla Culebra	Playa Brava	520.00	Good for fruits - and lumber.
423		do.	Punta de los Molinos Playa Tamarindo y Punta soldado.	470.00	Do.
424		do.	Punta soldado	150.00	Do.
425		do.	Terreno Bajo, lote 85		Good for lumber.
426		do.	Terreno Bajo, lote 86		Do.
427		do.	Terreno Bajo, lote 87		Do.
428		do.	Terreno Bajo, lote 88		Do.
429		do.	Terreno Bajo, lote 89		Do.
430		Isla Mona			Good for fruits and lumber.
431		Isla del Monito			Unknown.
432		Isla del Duende.			Do.
Total.				132,395.86	

Statement showing the quality, quantity, and approximate location of the lands that were owned by the Crown of Spain, etc.—Continued.

SWAMPY LANDS.

File No.	Town.	Ward.	Area.	Nature of land.
			<i>Acres.</i>	
1	Bayamón.....	Cataño.....		Low lands.
2	do.....	do.....		Do.
3	Barceloneta.....	Garrochales.....	200 00	If drained, good for sugar cane.
4	do.....	Palmas Altas.....	1, 100 00	Do.
5	Cabo Rojo.....	Guanajibo.....	370 00	Do.
6	do.....	Llanos Costa Barraco y Manglares.....		Unknown.
7	do.....	Pedernales.....		Do.
8	do.....	Antigua Bateria.....		Do.
9	do.....	Albúlera de Goitía Manglar.....	384 00	If drained, good for sugar cane.
10	do.....	Juyua Manglar.....	385 31	Do.
11	do.....	Boqueron.....	390 00	Unknown.
12	do.....	do.....	125 00	Do.
13	do.....	Laguna de Piñones y Cayo Hoyo Mulas.....	898 10	If drained, good for sugar cane.
14	do.....	Cangrejos Arriba.....	356 16	Do.
15	do.....	do.....	127 20	Do.
16	do.....	do.....	111 91	Do.
17	Ceiba.....	Manglar, Puerto y Playa de los Machetes.....	119 75	Do.
18	do.....	Chupa Cayos Manglares Cañuelo.....	400 00	Do.
19	do.....	Guayacan Manglar.....	225 00	Do.
20	Fajardo.....	Quebrada Vuelta.....		Unknown.
21	Guayama.....	Jobos.....	400 00	Do.
22	Guayanilla.....	Manglar del Puerto y Ensenada.....	170 00	Good for lumber.
23	Mayaguez.....	Miradero.....	89 00	Do.
24	do.....	Sabanetas.....	90 00	Unknown.
25	Naguabo.....	Dacuao Manglar Boca del Dagua.....	50 00	Good for lumber.
26	do.....	Caño Santiago Manglar.....	190 00	If drained, good for sugar cane.
27	Penuelas.....	Puerto.....	21 00	Good for lumber.
28	Ponce.....	do.....	70 00	Do.
29	do.....	Canas, Puerto de los Machetes.....		Do.
30	Río Grande.....	Zarral.....	250 00	Do.
31	Río Piedras.....	Hato Rey Monacillos.....	726 17	Unknown.
32	Salinas.....	Costa, Manglares.....	115 00	Good for lumber.
33	San Juan.....	Santurce, Terrenos Bajos parcela N.....		If drained, good for sugar cane.
34	do.....	Santurce, Terrenos Bajos, parcela O.....		Do.
35	do.....	Santurce, parcela P.....		Do.
36	do.....	Santurce, parcela Q.....		Do.
37	Yauco.....	Guánica, Manglar de Puerto.....		Unknown.
	Total.....		7,353.76	

DIVISION OF PUBLIC LANDS.

Herein we insert some detailed statements showing the survey work done by this division during the period from 1906 to 1918-19; survey of lots for municipal and school boards; amount expended each year; leases of land made in accordance with law and prices paid; copies of documents issued and the inscriptions of properties made on behalf of The People of Porto Rico.

In order to give a complete information we also insert a brief statement showing other work done each year by the division of public lands of this department:

Statement showing public and private lands surveyed from the fiscal year 1906-7 to 1918-19, inclusive, specifying the cost of maintenance of this division during said years and the income produced from leases of lands and fees collected for issuing copies of documents in the archives.

Fiscal year.	Government land.	Private lands.	Expenses.	Produced for leases.	Annual appropriation.
	<i>Acres.</i>	<i>Acres.</i>			
1906-7.....	610.52	2,391.17	\$9,871.42	.....	\$2,600
1907-8.....	8,255.91	11,174.27	7,600.00	.....	2,600
1908-9.....	8,531.00	4,917.59	13,080.00	.....	13,080
1909-10.....	2,052.00	.....	15,580.00	.....	13,080
1910-11.....	1,557.00	.....	9,162.44	\$10,803.63	11,200
1911-12.....	2,355.00	2,000.00	8,322.27	12,484.14	12,000
1912-13.....	3,226.10	3,500.00	10,406.44	9,999.95	13,040
1913-14.....	3,886.84	3,000.00	12,218.56	11,264.69	13,040
1914-15.....	7,230.89	3,900.00	10,468.06	11,752.78	9,040
1915-16.....	9,861.05	5,474.31	10,172.69	15,044.87	14,700
1916-17.....	18,782.17	7,840.30	13,185.49	16,089.01	14,420
1917-18.....	6,400.37	3,200.49	13,206.36	16,969.36	15,240
1918-19.....	2,468.84	3,796.84	15,144.11	20,358.00	15,240
Total.....	74,716.69	50,204.97	148,527.84	123,661.43	.....

As this statement shows the cost of maintenance of this division since year 1910-11, on which date we began to make leases of land, until 1918-19, inclusive, makes a total of \$102,376.42, while the income for the same period of time for leases of land and fees collected for issuing copies of documents in the archives, reach the amount of \$123,661.43—that is to say, a balance in favor of the division of \$21,285.01 during the last nine years.

Statement showing lands owned by the school boards and municipalities surveyed by this division.

Fiscal year.	Lands of the school boards.	Lands of the municipalities.
	<i>Square meters.</i>	<i>Square meters.</i>
1914-15.....	59,188.31	.....
1915-16.....	38,751.40	.....
1916-17.....	83,300.83	14,492.00
1917-18.....	69,652.00	16,554.05
1918-19.....	3,930.00	23,701.42
Total.....	254,922.54	54,937.47

The survey of these lands and lots is made on request of the school boards and municipalities, usually with the purpose of making a topographical map that might be used by the division of public buildings of this department as a base for the preparation of projects of school and municipal buildings prepared in said division. The cost of surveys is paid by the parties interested.

Statement showing number of acres of land annually leased and prices obtained.

Year.	Number of acres leased.	Annual rent.	Year.	Number of acres leased.	Annual rent.
Before 1910.....	6,365.41	\$8,617.20	1915-16.....	4,405.77	\$4,215.14
1910-11.....	1,662.80	2,186.43	1916-17.....	2,884.31	4,358.11
1911-12.....	2,322.55	1,628.05	1917-18.....	424.72	948.17
1912-13.....	1,418.60	348.52	1918-19.....	1,419.79	3,367.48
1913-14.....	918.97	765.88			
1914-15.....	6,078.87	4,821.19	Total.....	27,901.79	.....

The annual rental price of these leases of land has fluctuated between \$0.50 per acre in the mountain regions of the island, \$8 per acre in lands near the sea, \$0.11 per square meter in lots in the towns of the island, and \$0.28 per square meter in the best lots in the city of San Juan.

Statement showing the inscriptions of properties on behalf of the people of Porto Rico and certificates issued of documents in the archives.

Year.	Number of properties inscribed.	Certificates of documents.	Year.	Number of properties inscribed.	Certificates of documents.
1910-11.....	67		1915-16.....	30	..
1911-12.....	4	33	1916-17.....	61	35
1912-13.....	11	18	1917-18.....	26	74
1913-14.....	9	43	1918-19.....	21	39
1914-15.....	13	31			

DIVISION OF PUBLIC LANDS AND ARCHIVES, FISCAL YEAR 1918-19.

The division of public lands and archives is in charge of the survey, control, and leasing of lands belonging to The People of Porto Rico, part of which lands were originally owned by the Crown of Spain, and were later transferred by the Government of the United States to the insular government, to be administered for the benefit of The People of Porto Rico; other lands have come into the possession of the government, from private owners through attachment for nonpayment of taxes and subsequent purchasing by the government at the public sales held for disposal of these lands.

This division also has under its jurisdiction, since the year 1914, the surveying of sites for municipal and school buildings, the expenses incurred in these cases being reimbursed in due time to the insular government by the respective municipalities and school boards.

PERSONNEL.

The appropriation for the running expenses of this division during the fiscal year 1918-19 provided for the following:

Chief of division.....	\$2,300	Assistant archivist.....	\$600
Surveyor.....	1,600	Stenographer.....	840
Clerk and surveyor.....	1,300	Surveyor and computer.....	1,200
Surveyor.....	1,200	Incidental expenses.....	4,000
Draftsman-computer.....	1,000		
Archivist and librarian.....	1,200	In all.....	15,240

EXPENSES.

The expenses incurred in traveling, purchase and repair of instruments, laborers' wages, and other necessary expenses in connection with new surveys paid from the appropriation for incidental expenses, amounted during the fiscal year to \$3,904.11, the balance not expended to \$95.89; total allowance for incidental expenses, \$4,000.

This division also incurred other expenses as follows:

For payment of advertisements of public sales and for deeds, transferring to private parties three parcels of land belonging to The People of Porto Rico and situated in Puerta de Tierra, San Juan, in accordance with an act of the Legislative Assembly of Porto Rico entitled "An act to provide for the survey and sale at public auction of certain lands belonging to The People of Porto Rico; to construct the capitol, and for other purposes," approved April 13, 1916, \$287.96.

For work done in the execution of deeds transferring to private parties certain parcels of land owned by The People of Porto Rico, situated in the Barrio de Boqueron, Cabo Rojo, in accordance with a law of the legislative assembly entitled "An act to authorize the sale or lease of certain lands of The People of Porto Rico, situated in the Barrio of Boqueron, Cabo Rojo, and for other purposes," approved April 13, 1916, \$78.47.

The total running expenses of the division during the fiscal year were distributed as follows:

Salaries of employees.....	\$11,240.00
Field work and other incidental expenses.....	3,904.11
Total.....	15,144.11

This total does not include the expenditure made in work done on behalf of the municipalities and school boards, which amounted to \$171.68, as these expenditures, as already stated, are reimbursed to the insular government.

SURVEY OF PUBLIC LANDS.

The following statement shows the area of lands surveyed during the fiscal year 1918-19:

Lands surveyed for the insular government.

Municipality.	Ward.	Government property.		Private property.	
		Sq. meters.	Acres.	Sq. meters.	Acres.
Las Marias.....	Maravillas.....		50.77		
Do.....	do.....		17.79		
Ponce.....	City.....	80.46			
San Juan.....	Marina.....	70,240.96		8,234.36	
Do.....	Marina and Santurce.....		511.78		28.52
Maricao and Sabana Grande.....	Maricao Afuera and Santana.....		802.46		2,134.23
Bayamon.....	Catano.....	600.00			
Luquillo and Fajardo.....	Sabana and Rio Arriba.....		1,068.00		1,632.00
Total.....		70,921.42	2,450.80	8,234.36	3,794.75

Total area of lands surveyed for the insular government:	Acres.
Public lands.....	2,468.84
Private lands.....	3,796.84
In all.....	6,265.68

The cost per acre of surveying the government land amounted during this fiscal year to \$3.05, including the cost of cutting a path 8,108 meters long through the woods along the boundary line of a tract of government land in Maricao; the setting of permanent concrete monuments at every corner point of the tract surveyed, and also the placing of 125 concrete monuments along a boundary line 2,850 meters long on Government land in San Juan. This average cost has been obtained by dividing the total cost of surveying both the private and government land, which amounted to \$7,522, by the area of the government land alone, which totaled 2,468 acres. The exclusion of the private land surveyed in figuring this average cost is explained by the fact that the survey of the private land was only made as a necessary step in determining the portion really belonging to the government, all the work done being chargeable to the government land alone.

Lands surveyed for the school boards.

Municipality.	Ward.	Property of the school boards.
		Square meters.
Trujillo Alto.....	Cuevas.....	3,930.00

Lands surveyed for the municipalities.

Municipality.	Ward.	Property of the municipalities.
		Square meters.
San German.....	City.....	982.60
Do.....	do.....	2,873.52
Do.....	do.....	14,848.30
Aguedilla.....	do.....	5,187.00
In all.....		23,891.42

OTHER WORKS.

The following work was also accomplished by the division during the year:

Investigations were made in regard to certain public lands in the municipality of Guanica.

In compliance with the provisions of an act of the legislature entitled "An act to provide for the settlement of land claims in the barrio of Catano, municipality of Bayamon," approved March 10, 1910, and also in accordance with the recommendation made by the commission created by the said act, to the effect that the rights and titles of certain parcels of land situated in Catano be transferred by the insular government to those persons who had been occupying the same for some time, the commissioner of the interior has continued this work, having executed during this year 30 deeds of conveyance on behalf of the different parties in possession of these lands.

Three parcels of land were sold in Puerta de Tierra, San Juan, to the Texas Co., S. Ramírez & Co., and Federico Vázquez, for the sum of \$7,100, \$3,185, and \$2,995.20, respectively, these transactions having been carried out in accordance with the terms of an act of the legislature, entitled "An act to provide for the survey and sale at public auction of certain lands belonging to The People of Porto Rico; to construct the capitol, and for other purposes," approved April 13, 1916.

During the year 18 real estate properties belonging to The People of Porto Rico were recorded in the registry of property of San Juan, one in the registry of property of Arecibo, and another in the registry of property of Guayama.

The division issued to private parties 39 copies of public documents in the files of this department, collecting fees for same in the amount of \$88.04.

The work of classifying and taking an inventory of the documents belonging to the old Spanish archives was continued during the year.

The division handled during the year the work related with the leasing to private parties of 43 parcels of government land, from which the government will derive an annual rental of \$3,367.48. The annual rent derived from all the government lands leased to public parties up to June 30, 1919, amounts to \$20,264.96, an increase of \$2,418.91 over the income for last year. Eleven parcels of land which had been acquired by the government for default in payment of taxes, were redeemed by their previous owners or interested parties in accordance with a law approved on December 3, 1917.

A statement is attached herewith showing the parcels of land and the area leased during the year, some of which were already leased, but for which new contracts had to be made owing to the terms of their leases having expired.

RECOMMENDATIONS.

It is estimated that about 75,000 acres of public lands have not been surveyed as yet, most of which is being exploited by squatters or intruders, who in the majority of cases spoil the land, thus lowering its value.

The cost of surveying these lands will depend largely on the appropriations made every year for this purpose. Other expenses being practically constant, it follows that the larger the extra appropriation made for these surveys the larger will be the field force employed in this work, and, consequently, the lower will be the cost per acre. Fixing a period of five years to carry out this work, it is estimated that the total cost of surveying this land will be in the neighborhood of \$90,000. There is no doubt that once surveyed the income that could be derived by leasing this land will more than offset this cost. It is therefore recommended that the legislature be requested to make a yearly appropriation of \$18,000 continuous over a period of five years.

Statement showing land belonging to the people of Porto Rico leased by the commissioner of the interior with the approval of the executive council during the fiscal year 1918-19.

Date.	Name of leases.	Area.	Municipality.	Annual rent.	Percentage.
1918.					
July 2	Cecilia M. Vda. de Santiago	53.90 square meters.	Playa Ponce.	\$4.30	8.00
20	Freeman Bernstein.	2,000 square meters.	Pta. de Tierra.	50.00	.....
28	Hermenegilda Blas.	64 square meters.	Mayaguez.	5.12	8.00
28	C. J. Cedo.	330 square meters.	do.	26.40	8.00
Aug. 6	Ezequiel Villafañe.	120 square meters.	Ponce-Playa.	9.60	8.00
6	do.	84 square meters.	do.	6.72	8.00
6	do.	60 square meters.	do.	4.80	8.00
6	do.	20 square meters.	do.	1.60	8.00
6	Maldonado Hermanos.	84 square meters.	do.	6.72	8.00
6	Olegario Rivera.	12.61 acres.	Utua.	11.20	8.00
6	Buenaventura La Torre.	14 acres.	do.	10.00	9.25
25	Gregorio Rivera.	5 acres.	Naranjito.	2.40	8.00
25	do.	10 acres.	do.	4.00	8.00
Sept. 3	Marc Lejeune.	810.88 acres.	Isla Mona.	704.00	8.00
3	R. Cordero Matos.	65 square meters.	Ponce-Playa.	5.20	8.00
10	Francisco Rodríguez.	5 acres.	Ponce.	3.20	8.00
10	do.	2.50 acres.	do.	10.24	8.00
16	Pedro Santiago.	3 acres.	do.	8.00	8.00
Oct. 1	Francisco Rodríguez.	25 acres.	Utua.	12.00	8.00
16	Sobrinos de Ezquilaga.	Un rancho.	San Juan.	1,620.00	.....
27	Juan Lorenzo Aponte.	50 acres.	Ciales.	62.40	8.00
Nov. 5	Antonio Rodríguez.	100 acres.	do.	80.80	8.00
11	José Juan Rivera.	6.27 acres.	Salinas.	12.00	20.00
11	Municipio de San Juan.	35.24 square meters.	do.	1.00	.....
20	Fernando Lloreda.	426.62 square meters.	Mayaguez.	40.00	9.38
Dec. 4	Luis Colón Delfi.	61.98 acres.	Salinas.	60.00	13.04
1919.					
Jan. 7	Fernando Vázquez.	97.06 acres.	do.	109.60	8.00
7	José Romaguera.	72 square meters.	Ponce-Playa.	5.76	8.00
7	do.	38 square meters.	do.	3.00	8.00
7	Pedro Maldonado.	29.68 square meters.	do.	7.00	23.07
7	Rafael del Valle Zeno.	6.82 acres.	Río Piedras.	110.00	8.06
7	Belán Agosto.	220 square meters.	Catano.	10.00	9.09
7	Heraclio López.	5 acres.	Naranjito.	2.40	8.00
Feb. 4	Isaura C. Vda. González.	Una casa.	Arecibo.	192.00	8.20
4	Acisclo García.	123.21 acres.	Cabo Rojo.	2.46	8.00
Mar. 7	Alejandro Cueva.	25.67 acres.	Utua.	15.66	6.00
Apr. 11	Maria del Carmen Mayo.	78.75 square meters.	Mayaguez.	6.30	8.00
11	Genaro Roman.	19 square meters.	do.	4.00	21.05
May 19	Benigno Rodríguez.	519.25 square meters.	do.	31.00	.....
19	Paulino Hernández.	147.18 acres.	Utua.	75.60	6.00
19	Juan Vázquez Ramos.	15 acres.	Sabana Grande.	8.00	10.67
21	Demetrio Ortiz.	5 acres.	do.	5.00	10.00
June 13	Andrés García & Co.	1.53 acres.	Arecibo.	18.00	5.89
	Total.			3,367.48	

BUREAU OF INSULAR TELEGRAPH.

BRIEF HISTORICAL ACCOUNT.

First experiments.—Searching for data concerning the first experiments made with the telegraph, we came across a "Treatise on Physics," written by A. Daguin, where it is stated when speaking of the history of the electric telegraph that it was Franklin who first conceived this idea, although it seems that he did not put it into practice. It is also stated that the first experiment was made in Genoa in the year 1774 by Lesage, who used 24 metallic wires with electroscopes attached at their ends to correspond with the letters of the alphabet, and that it was in the year 1837 that Wheatstone in England and Stenheil in Germany built the first telegraph apparatus which have regularly operated over long distances, it being at about that same time that Morse first gave to the world his invention of the recording telegraph. Morse claims from Wheatstone the priority as to the use of electromagnets and also claims from Stenheil the invention of the first recording telegraph. In the "Treatise on Physics" above-mentioned it is also stated that Morse, a New York professor, was working on the recording telegraph named after him, and that he must have conceived the idea of such apparatus in the year 1832.

Porto Rico can be proud of being able to record in its history the fact that the inventor of the electric alphabet universally accepted and in use was a guest of this island, and that some of his first trials with his invention were made here.

About this event so interesting for Porto Rico we have found some information in a book¹ entitled "Samuel F. B. Morse, His Letters and Journals," edited and supplemented by his son Edward Lind Morse. This book records that on the 17th of November, 1858, Prof. Morse, with his wife and his two younger sons, "sailed from Southampton for Porto Rico, where his elder daughter, Mrs. Edward Lind, had for many years lived, and where his younger daughter had been visiting while he was in Europe." The party arrived at the port of St. Thomas in the month of December, 1858, on a Thursday morning, and they stayed there until the following Monday, while his son Edward engaged a schooner which happened to be in port to take them to Arroyo, P. R.

At 4 o'clock in the afternoon the governor of St. Thomas sent his official barge under the charge of the captain of the port, and in a few minutes they were rowed alongside of the schooner *Estelle*, which was bound for their destination.

"At daylight in the morning of Tuesday they were sailing along the shores of Porto Rico, and at sunrise they found they were in sight of Guayama and Arroyo, and with their glasses they saw at a distance the buildings of Edward's estate." His relatives "had been advised of their coming, and a flag was flying on the house in answer to the signal made from the vessel. In two or three hours they got to the shore as near as was safe for the vessel," and they were then taken ashore in the boat of the health officer, Dr. Egan, an Irishman educated in America, who came to inspect the vessel. On the shore they were met by their relatives who were waiting with carriages and who took them to their residence.

Below are quoted some of the paragraphs of a letter written by the distinguished guest on March 2, 1859:

"I have just completed with success the construction and organization of the short telegraph line, the first on this island, initiating the great enterprise of the southern telegraph route to Europe from our shores so far as to interest the Porto Ricans in the value of the invention.

"Yesterday was a day of great excitement here for this small place. The principal inhabitants of this place and Guayama determined to celebrate the completion of this little line, in which they take a great pride on being the first in the island, and so they complimented me with a public breakfast, which was presided over by the lieutenant colonel commandant of Guayama.

"The commandant and alcalde, the collector and captain of the port, with all the officials of the place, and the clergy of Guayama and Arroyo, and gentlemen planters and merchants of the two towns, numbering in all about 40, were present. We sat down at 1 o'clock to a very handsome breakfast and the greatest enthusiasm and kind and generous feeling were manifested. My portrait was behind me upon the wall draped with the Spanish and American flags. I gave them a short address of thanks, and took the opportunity to interest them in the great telegraph line which will give them communication with the whole world. I presume accounts will be published in the United States from the Porto Rico papers. Thus step by step (shall I not rather say stride by stride?) the telegraph is compassing the world."

Morse and his family left Porto Rico for Poughkeepsie toward the middle of April, 1859.

ESTABLISHMENT OF THE TELEGRAPH IN PORTO RICO.

Lack of data prevents us from making a complete review of the activities of the telegraph in Porto Rico during the Spanish régime, but we have succeeded in obtaining some interesting information which goes back to the year 1864. In this year the Spanish Government conceived the idea of establishing telegraphic communication between the various towns of the island, connecting the capital with the other principal towns, and for this purpose a plan was prepared, which included a telegraphic line from San Juan to Mayaguez via Arecibo, and another line from San Juan to Ponce, passing through Guayama, with a branch line from Caguas to Humacao. On June 12, 1864, this plan was approved by a royal order, and an estimate was then prepared which amounted to 70,850 pesos, but the plan was not carried out. In the year 1866 another plan with an estimate of cost of 36,157 pesos was approved, a call for bids was made, but no proposals were received.

¹ This book belongs to the Jacksonville Free Public Library, of Jacksonville, Fla., and it came to our hand through the kindness of Miss Fanny Egan, of Arroyo, P. R.

INSTALLATION OF FIRST TELEGRAPHIC LINES AND STATIONS.

In the year 1869 a change took place in the highest authority of the island, and the new administration undertook the construction of a telegraphic line 95 kilometers long between San Juan and Arecibo. The cost of this line was 7,850 pesos, but the government only paid 2,750 pesos, and the rest was covered by public subscription. This line was completed in December of the same year, telegraphic connections having been thus established between San Juan, Rio Piedras, and Arecibo.

Once this first line was built, the governor of the island approved the regulations for the telegraphic service. These regulations provided that the director of administration in the island, who was the chief of the department of "Fomento," should have the immediate direction of the service, and that all matters pertaining to the telegraph should be handled through the office of the "Inspección General de Obras Publicas."

The construction of lines then followed, in accordance with the approved general plan. The latter was completed in May of the year 1870, with the exception of the stretch from San German to Ponce.

When these lines were built the State only installed stations at the more important towns, but at the request of other municipalities other stations were annually installed, the cost of their installation as well as their operating expenses being paid by the municipalities themselves. The civil government had, however, reserved the right to acquire any of the municipal stations whenever public needs should justify it, after indemnifying the respective municipality an amount which would be fixed in accordance with the appraised value of the installation at the time of the purchase as well as the benefit obtained from the operation.

The following statement shows the business transacted by the various stations established during the year 1870-71:

Business transacted by the various telegraphic stations.

BELONGING TO THE STATE.

Stations.	Telegrams.		Amounts collected.		Total.
	Official.	Private.	Official service.	Private service.	
			Pesos.	Pesos.	Pesos.
Capital.....	898	8,343	1,432.80	5,643.40	7,076.20
Rio Piedras.....	159	140	241.20	73.60	314.80
Arecibo.....	133	2,083	237.40	1,314.80	1,552.20
Aguadilla.....	193	2,279	332.00	1,406.20	1,738.20
Mayaguez.....	206	3,963	329.60	2,612.80	2,942.40
Humacao.....	63	1,070	127.20	682.80	810.00
Guayama.....	78	1,134	124.80	657.50	782.30
Ponce.....	254	3,460	465.60	2,428.80	2,894.40
Total.....	1,984	22,472	3,290.60	14,819.90	18,110.50

BELONGING TO THE MUNICIPALITIES.

			Pesos.	Pesos.	Pesos.
Caguas.....	81	694	151.40	378.00	529.40
Arroyo.....	43	1,035	73.60	628.70	712.20
Vega Baja.....	38	69	74.90	40.00	114.80
San German.....	17	52	30.80	25.20	56.00
Cabo Rojo.....	22	67	26.80	37.20	64.00
Total.....	201	1,917	357.40	1,119.10	1,476.40

The office hours were from 6 o'clock in the morning until 6 o'clock at night.

In December, 1873, there still remained to be built the line between San German and Ponce, but with the news that war was likely to be declared between the United States and Spain, the civil governor gave orders for its immediate construction, and a special appropriation was made therefor, amounting to 12,704 pesetas 50 céntimos (2,540.90 pesos). This line was completed in January, 1874, thus establishing through communication from San Juan to Ponce via Mayaguez. This entire line was known as the Western Line.

In the same year, 1874, additional municipal offices were established in the towns of Bayamon, Manati, Afiasco, Yauco, Guayanilla, Ponce Playa, Yabucoa, Naguabo, and Fajardo. By this time there were already in the island six telegraphic lines, including a branch line from Fajardo to Humacao, which had been built by the municipalities of Fajardo, Naguabo, and Humacao. The telegraph service was then taken care of by 22 stations, 10 of which belonged to the State and the other 12 to the municipalities. The station at Arroyo, which had been installed by the municipality and where the income exceeded the expenditures, was transferred to the State in November, 1874.

Telegraphic stations belonging to the State and the municipalities.

BELONGING TO THE STATE.

Year.	Number of telegrams sent and received.	Collections made, including official messages.	Expenditures.	Loss.
		<i>Pesos.</i>	<i>Pesos.</i>	<i>Pesos.</i>
1871-72.....	30,144	20,599.00	25,616.80	5,017.80
1872-73.....	35,198	23,875.40	32,078.40	8,201.00
1873-74.....	26,804	19,520.40	22,981.60	3,461.20

BELONGING TO THE MUNICIPALITIES.

1871-72.....	5,179	<i>Pesos.</i> 3,365.20	There are no data about the expenditures. It may be possible that they were included in the expenditures given for the stations belonging to the State.
1872-73.....	8,576	5,410.60	
1873-74.....	5,439	4,116.80	

COMMUNICATION WITH OTHER COUNTRIES—INSTALLATION OF THE SUBMARINE CABLES.

A very important event in the history of communications in this island took place in the year 1870, when cable communication was established between Porto Rico and the rest of the West Indies and the American Continent. The West Indies & Panama Telegraph Co. had a franchise for laying a submarine cable from San Juan to St. Thomas and Jamaica, and this work was done and completed in the year 1870. Two years later, in 1872, communication was also established between this island and Cuba, and in the year 1873 authorization was granted to this company to land in Ponce its cable line from Jamaica.

Comparative statement of the personnel, and their salaries, employed by the telegraph service in the years 1874, 1903, and 1919.

Spanish Government, year 1874. (Before the consolidation of the telegraph and mail service.)	American Government, year 1903.	American Government, year 1919.
1 special inspector..... \$2,000	1 superintendent.... \$1,500	1 superintendent..... \$2,500
1 wire chief..... 1,200	1 paymaster..... 1,200	1 assistant superintendent..... 1,900
	1 clerk..... 720	1 clerk..... 1,300
		1 clerk and translator..... 1,000
	1 station agent..... 1,000	1 clerk..... 600
	1 operator..... 900	1 clerk..... 540
1 station agent..... 1,000	1 station agent..... 1,080	1 porter..... 420
1 station agent..... 1,000	1 station agent..... 1,080	1 chief operator..... 1,400
	2 clerks, each..... 480	1 operator and clerk..... 900
	1 clerk..... 360	1 agent..... 1,000
	6 station agents, each..... 900	2 clerks, each..... 480
	2 operators, each..... 840	1 clerk..... 480
7 operators, each..... 700	6 operators, each..... 720	3 operators, each..... 900
	5 operators, each..... 600	4 operators, each..... 840
	3 operators, each..... 360	8 operators, each..... 720
		5 operators, each..... 600
		3 relief operators, each..... 600
		21 operators, each..... 480

Comparative statement of the personnel, and their salaries, employed by the telegraph service in the years 1874, 1903, and 1919—Continued.

Spanish Government, year 1874. (Before the consolidation of the telegraph and mail service.)	American Government, year 1903.	American Government, year 1919.
14 operators, each..... 480	20 operators, each... 480 1 operator..... 300	20 operators, each..... 480 1 operator..... 240 3 telephone operators, each..... 360 4 telephone operators, each..... 300 8 telephone operators, each..... 240 9 telephone operators, each..... 200 2 messengers, each..... 360 2 messengers, each..... 300 6 messengers, each..... 200 7 messengers, each..... 150 57 messengers, each..... 120 1 chief lineman..... 900 1 lineman..... 720 2 linemen, each..... 600 10 linemen, each..... 480
2 messengers, each..... 240	2 station agents, each.....	
7 messengers, each..... 180	4 messengers, each... 180 5 messengers, each... 120 4 messengers, each..... 60	
2 foremen, each..... 720	1 lineman..... 600	
18 linemen, each..... 360	7 linemen, each..... 480	

DEVELOPMENT OF THE TELEGRAPH SYSTEM UNDER THE AMERICAN GOVERNMENT.

At the time of the American occupation, in the year 1898, the telegraph system extended throughout most of the towns of the island, connecting 41 stations. The aggregate length of the various lines was 1,240.5 kilometers. The island was at that time divided into four telegraph districts, as follows:

San Juan District.—Offices were established in the Fortaleza Building, Semaforo, Lazareto, Rio Piedras, Caguas, Bayamon, Vega Baja, Manati, Ciales, Arecibo, and Utuado.

Ponce District.—With stations in Ponce, Ponce Playa, Juana Diaz, Coamo, Aibonito, Cayey, Guayama, Salinas, Santa Isabel, Adjuntas, and Guayanilla.

Mayaguez District.—With stations at Mayaguez Playa, Añasco, Aguadilla, Camuy, Lares, San Sebastian, Cabo Rojo, San German, and Yauco.

Humacao District.—With stations at Naguabo, Fajardo, Juncos, San Lorenzo, Yabucoa, Maunabo, and Arroyo.

Each district was in charge of the chief of the principal office. The director of communications, with headquarters at San Juan, was the chief of the whole service.

The schedule of rates charged was the following:

Twenty cents for an ordinary commercial telegram consisting of 15 words or less, and 2 cents extra for each additional word.

When the telegram was of an urgent character, and the sender requested an immediate transmission, three times the ordinary fee was collected.

In the case of multiple messages the ordinary rate was charged for the first one; and 10 cents extra for each additional message. Press telegrams had a discount of 50 per cent over the ordinary rate.

When the American Army took charge of the island in 1898, the "Signal Corps" took the telegraph service under its care, and organized it under the military government.

DAMAGES CAUSED BY THE CYCLONE OF "SAN CIRIACO," AND NECESSARY REPAIRS.

The cyclone of San Ciriaco, which swept over the island the 8th of August, 1899, destroyed almost completely all the telegraph lines. The Signal Corps immediately undertook their reconstruction, with the aid of all the employees of the various stations. In spite of the many difficulties encountered in the transportation of materials, owing to the interruption of traffic over the insular roads, rapid progress was made, and telegraphic communication was reestablished by the end of the following month of September between the following stations: San Juan and Ponce by way of the Military Road, Ponce and Arroyo, Ponce and Mayaguez, Caguas and Humacao, San Juan and Humacao through Fajardo, San Juan and Mayaguez via Aguadilla, Aibonito and Barros, and Aguadilla and Lares. In the month of October, the repairing of the line from Fajardo to the Fajardo Lighthouse was completed, and the line between Ponce and Adjuntas was completed in the following month of December.

The lines between Arroyo and Humacao, Adjuntas and Arecibo, Lares and Utuado, Bayamon, Toa Alta and Corozal, Manati, Ciales and Morovis, were abandoned.

MILITARY TELEPHONE SERVICE AND TELEGRAPHIC LINES.

In March, 1899, a small military telephone exchange was installed in San Juan with a capacity of 53 telephones, which connected all government offices with the residences of the chief officials. The Signal Corps established telephone service in San Juan Cayey, Aibonito, Coamo, Ponce, Humacao, Manati, Aguadilla, and Mayaguez.

In the year 1900 the Signal Corps had in service eight telegraphic lines with 614 kilometers of wire; four lines in bad condition and eight military telephone exchanges with 178 kilometers of wire. There were also 41 offices in operation, 11 of which were discontinued during that year, owing to the condition in which they were left by the damages caused by the cyclone of 1899, and to the fact that in view of the approaching transfer of the lines to the civil government of the island, the Signal Corps had been instructed to leave in the island the least possible number of telegraph operators, closing offices of less importance.

The following extract shows the volume of telegraph business handled by the end of the year 1900:

Number of commercial messages.....	65,283
Number of free messages.....	49,600
Total.....	114,983
Cash receipts.....	\$18,845.79
Value of free service.....	27,217.83
Total.....	46,063.62

SUMMARY OF RECEIPTS AND EXPENDITURES.

Expenditures:	
Material, labor, house rent, etc.....	19,560.28
Paid to privates of the Signal Corps.....	24,313.84
Extra compensation for meals.....	12,831.25
House rent for offices.....	6,548.44
Transportation.....	6,068.02
Total.....	70,298.98
Receipts:	
Cash receipts during 12 months.....	18,845.79
Government operating expenses.....	51,398.14
Value of free messages.....	27,217.83
Difference.....	24,175.31
Value of material shipped and paid by the United States.....	4,822.62
Deficit.....	28,997.93

TRANSFER OF THE MILITARY TELEGRAPH SERVICE TO THE INSULAR GOVERNMENT

On February 1, 1901, and in accordance with an order received from the War Department by Col. Glassford, Chief Signal Corps, the telegraph system in Porto Rico was transferred to the insular government. It was placed under the department of the interior, and the bureau of insular telegraph was then established under the direction of a superintendent. The valuation of the system at that time amounted to \$44 000.

When the transfer was made there were the following telegraphic lines in operation:

A two-wire line from San Juan to Ponce strung along the Military Road; a line from San Juan to Ponce via Mayaguez; a line from San Juan to Ponce via Fajardo and Humacao. There also existed, although in bad condition, the following lines:

A line from Ponce to Adjuntas; another from Manati to Ciales; one line from Aibonito to Barro; one from Fajardo to the Fajardo Lighthouse; one from Humacao to Playa Naguabo; one from Coamo to Coamo Springs; one from Mayaguez to Las Marias; and one from Aguadilla to Lares.

These lines connected 10 telegraph offices in the following towns: Aibonito, Central Aguirre, Caguas, Cayey, Fajardo, Ponce, Humacao, Playa Mayaguez, Playa Ponce, and San Juan.

IMPROVEMENTS.

The insular government proceeded to open new offices, and in July of the same year telegraph instruments were installed in Manati, Aguadilla, Arroyo, Coamo, Guayama, San German, Arecibo, and Yauco, making on that date a total of 18 offices. The San Juan, Ponce, and Mayaguez offices rendered day and night service from 8 a. m. to 12 p. m., and the other offices from 8 a. m. to 12 m., from 1 p. m. to 6 p. m., and from 7 p. m. to 8 p. m. The insular government made all efforts to extend the telegraph service in the island, and in July, 1902, there existed 32 telegraphic offices, and some of the lines which had been abandoned by the Signal Corps were reconstructed. In the same year the amount of \$6,260 were appropriated for contingent expenses of the bureau.

In 1916 the bureau of insular telegraph had in operation 14 telegraph lines, ground circuit, with 1,194.16 kilometers of wire; 9 telephone lines, ground circuit, with 166.92 kilometers of wire, and 6 metallic circuit telephone lines with 789.84 kilometers of wire, making a grand total of 2,150.92 kilometers. There were 51 offices, 14 of which were equipped with telegraph instruments; 14 equipped with telephone instruments, but handling telephone and telegraph service; and 23 equipped with both telegraph and telephone instruments, telegraph service was also handled in 20 stations of the Telephone Co. on a 25 per cent commission basis. The Ceiba and Vieques offices were equipped with heliograph instruments.

The following extract shows the transactions of the bureau during the fiscal year 1915-16:

Incomes:		
Cash receipts.....		\$71,714.73
Value of half-rate messages.....		2,549.39
Value of free messages.....		2,048.49
Total		76,312.61
Expenditures:		
Operation of the system.....	\$58,270.01	
Repair and maintenance of lines.....	8,519.58	
Extension and reconstruction.....	4,381.82	
		71,171.41
Surplus		5,141.20

FREE USE OF THE TELEGRAPH LINES.

The lieutenant colonel commanding the military district of Porto Rico requested and obtained from the civil governor of the island the free use of the telegraph lines for the officers of the United States Army and Navy in Porto Rico. Later on this privilege was also extended to the following officials of the insular government: The governor of Porto Rico; the secretary of Porto Rico; the attorney general; the auditor; the treasurer and the employees and agents of the same department; the commissioner of the interior, and the employees of public works; the commissioner of education; the superior board of health and its employees; the charity board and its employees; the judges of the supreme court; the marshal of the supreme court; the judges and the prosecuting attorneys of the districts court; the insular police; the directors of prison; the post office department; the United States district court; the police judges; the superintendent of elections; and the members of the Porto Rico Legislative Assembly.

MUNICIPAL COOPERATION.

During the first year of its operation under the civil government, no money was available for the maintenance of the insular telegraph, since no appropriation had been made, and its expenses were therefore paid partly from its own income and partly from the appropriation for incidental expenses assigned to the department. Cooperation was also requested from the municipalities, many of which gave assistance furnishing quarters for the installation of the offices and also paid the operators. Things were thus managed up to the year of 1902, when money was appropriated for the maintenance of the service.

LACK OF TRAINED PERSONNEL.

Owing to the lack of operators many new offices could not be opened and it was decided to start a school for operators in San Juan under charge of one of the regular operators. This scheme gave very good results and shortly afterwards many of the students were employed as operators and helpers.

FAVORABLE LEGISLATIVE ACTION.

As the money appropriated was not enough to carry out the plan of the insular government of extending the telegraph system all over the island, the legislature in 1905-6 made a special appropriation of \$15,000 for the construction of new telephone lines. This amount was exhausted soon afterwards and the following year of 1907 another appropriation of \$25,000 for the same purpose was obtained from the legislature. With this money several small towns were connected to the neighboring telegraph offices and a long-distance telephone line was installed between San Juan and Ponce. A local telephone system was also installed in Caguas. In the year 1911, the legislature voted another special appropriation of \$25,000 for continuing the improvements and the extension of the telegraph and telephone system. With this money the line between Guayama and Salinas was reconstructed, and 437 poles were replaced by new ones in the various lines of the system.

MEANS ADOPTED TO INCREASE THE INCOME AND TO REDUCE EXPENSES.

On account of the deficits resulting every year in the operation of the insular telegraph and with a view of making it self-supporting, it was decided in the year 1905 that all departments and divisions of the insular government should pay for their telegrams at half rate with the exception of the insular police and the members of the legislative assembly, but later on the insular police was also required to pay the half rate. The commercial rate was raised in 1906 to 25 cents for the first 10 words and 2 cents for each additional word.

In the year 1907 an attempt was made to increase the revenues by reducing the rate for commercial messages to 15 cents for the first 10 words, and 1 cent for each additional word, and also lowering the rate for the press messages to 10 cents for the first 10 words and 1 additional cent for each group of 3 additional words.

This scheme resulted in failure, for while the number of telegrams increased 35 per cent, the income, however, was reduced by 25 per cent.

In the year 1909 the former schedule of rates was again put in force, and it has not been changed since. A new rate of 15 cents for the first 10 words and 1 cent for each additional word in the case of multiple telegrams numbering more than 10 was also established, and another rate of 30 cents for 50 words and 1 cent for each additional word in the case of night letters.

At the same time that the telegraph system was being extended, all kinds of economies in the expenses of the bureau were introduced in order to reduce the annual deficits. With this end in view, several offices which did not quite cover their expenses were closed, and an arrangement was made with the Telephone Co. by which they would take care of the telegraph service in those towns where the bureau had no offices.

COMPETITION OF OTHER TELEPHONE COMPANIES.

It is worth mentioning here that the insular telegraph has had to meet strong competition from the various telephone companies of the island. In the year 1901 these companies had but two or three local plants, but their sphere of operation was gradually enlarged, new local plants were established in other towns, long-distance lines were built between several towns, and of course this new service meant a reduction in our business of some 40 per cent or even 50 per cent in those towns.

Formerly only one cable company had engaged in business in Porto Rico, but by the year 1913, another company, the French Cable Co., was operating in the island under authority given it to land its cables, coming from Haiti, in San Juan. Later a franchise was granted to this company to connect in Mayaguez its cables coming from Santo Domingo, and to build a telegraph line for its exclusive use from Mayaguez to San Juan. When the English Cable Co. alone was doing business, the managers of the telegraph stations acted personally as their agents for the collection of the cablegrams filed in each station, and for this service the company paid them a commission equal to 5 per cent of the amount collected. This was discontinued in the year 1911, and the insular government took charge of and made itself responsible for the company's funds.

Comparative statement of receipts and expenditures of the telegraph system from the year 1870 to 1918.

Year.	Total expenses, including salaries of personnel, cost of materials, etc.	Collection.			Profit.	Loss.
		Private service.	Official service.	Total.		
		Pesos.	Pesos.	Pesos.	Pesos.	Pesos.
1870-71.....	23,163.40	14,819.90	3,291.00	18,110.90		5,052.50
1872-73.....	32,076.40	18,597.60	5,277.80	23,875.40		8,201.00
1889-90.....	14,047.60	3,669.60	5,443.40	9,113.00		4,934.60
1903-4.....	47,259.19	29,381.11	19,732.96	49,114.07	1,854.88	
1904-5.....	58,800.00	35,855.79	32,538.99	68,394.78	9,594.78	
1905-6.....	59,634.50	50,341.24	12,933.83	63,278.07	3,643.57	
1906-7.....	52,750.41	57,682.63	6,059.02	63,741.65	10,991.24	
1907-8.....	60,994.76	62,031.03	5,477.18	67,508.21		3,496.55
1909-10.....	69,783.26	60,968.81	7,851.83	68,820.64		962.62
1910-11.....	72,959.93	66,225.61	10,923.23	77,148.84	4,188.91	
1911-12.....	69,566.23	71,628.13	18,794.80	90,422.93	20,856.70	
1912-13.....	71,230.05	65,702.80	29,291.87	94,994.67	23,764.62	
1913-14.....	68,224.43	68,645.70	17,031.05	85,676.75	4,900.23	
1914-15.....	72,500.21	74,956.56	8,473.30	83,429.86	10,929.65	
1915-16.....	71,171.41	71,714.73	4,597.88	76,312.61	5,141.20	
1916-17.....	83,800.04	86,998.17	6,976.28	93,974.45	10,172.41	
1917-18.....	93,130.15	96,825.98	16,346.98	113,172.96	20,042.81	
1918-19.....	100,270.65	109,591.26	16,691.88	126,283.14	26,006.49	

Comparative statement of the telegraph rates in force at different periods.

Year.	For commercial messages.	For press messages.	For multiple messages.	For government messages.	For night letters.
1869	From 1 to 10 words, 1 escudo (50 cents); from 10 to 20, 1½ escudos; from 20 to 30 words, 2 escudos; from 30 to 40 words, 2½ escudos; from 40 to 50 words, 3 escudos; and so on, increasing one-half escudo for each series of 10 words.	There was none.	There was none.	There was none.	There was none.
1883	20 cents for 15 words or less, and 2 cents for each additional word.	do.	do.	do.	Do.
1890	10 cents up to 15 words and 1 cent for each additional word.	do.	do.	do.	Do.
1898	20 cents up to 15 words and 2 cents for each additional word (urgent messages were three times as much).	50 per cent discount over the commercial rate.	10 cents for each telegram after the first.	do.	Do.
1899	20 cents for the first 10 words and 1 cent for each additional word.	10 cents for the first 10 words and 1 cent for each additional word.	There was none.	do.	Do.
1905	do.	do.	do.	10 cents for the first 10 words and 1 cent for each additional word.	Do.
1906	25 cents for the first 10 words or less and 2 cents for each additional word.	do.	do.	do.	Do.
1907	15 cents for the first 10 words and 1 cent for each additional word.	10 cents for first 10 words and 1 cent for every 3 words above that.	do.	do.	Do.
1909	25 cents for the first 10 words and 2 cents for each additional word.	10 cents for the first 10 words and 1 cent for each additional word.	do.	50 per cent discount from the commercial rate.	Do.
1916	do.	do.	15 cents for first 10 words and 1 cent for each additional word in no less than 10 copies.	do.	30 cents for the first 50 words and 1 cent for each additional word.

Number of messages transmitted during the years from 1871 to 1874 and from 1900 to 1919.

Year.	Government free messages.	Commercial messages.	Total.	Year.	Government free messages.	Commercial messages.	Total.
1871.....	2,185	24,389	26,574	1904.....	13,287	259,466	272,753
1872.....	4,120	31,203	35,323	1909.....	15,018	226,828	241,846
1873.....	5,201	38,573	43,774	1910.....	12,321	215,362	227,683
1874.....	3,918	28,325	32,243	1911.....	12,651	221,332	233,983
1900.....	49,669	65,283	114,952	1912.....	13,344	241,716	255,060
1901.....	12,558	54,299	66,857	1913.....	26,939	198,301	225,240
1902.....	14,875	206,061	220,936	1914.....	14,121	181,943	196,064
1903.....	63,711	223,675	287,386	1915.....	6,530	200,691	207,221
1904.....	68,690	234,597	303,287	1916.....	1,892	187,693	189,575
1905.....	69,321	241,118	310,439	1917.....	2,993	249,927	252,920
1906.....	26,000	182,802	208,802	1918.....	10,656	259,004	269,660
1907.....	14,602	201,687	216,489	1919.....	38,002	311,916	349,918

NOTE.—There are no data concerning the years from 1874 to 1899.

FISCAL YEAR 1918-19.

The fiscal year just ended has been perhaps the most trying in the existence of the telegraph service in Porto Rico. Besides the European war, which caused a considerable increase in the telegraph business, both private and official, attention had to be given to the many interruptions and damages caused to the lines and offices by the earthquakes which occurred in the month of October, 1918. To this must be added the enormous amount of business which was brought on the telegraph lines all over the island immediately following the earthquakes and during the epidemic of influenza. So large was this business that during the month of October alone 33,307 telegraph messages were transmitted, with a value of \$11,443.26.

I deem it my duty to record here that notwithstanding the many inconveniences which confront this bureau whenever such special circumstances occur on account of the lack of sufficient lines and employees, nevertheless the service was on this occasion rendered in the most satisfactory manner and all the employees have deserved our recognition for the work they did during these trying moments, working long hours day and night in the discharge of their duties without even a word of protest.

In order to partially compensate them for their work, a special appropriation of \$3,000 was requested and obtained from the legislature during its extraordinary session. This amount was applied in paying them for the extra hours worked.

During this year we have again found that the regular appropriations yearly assigned for the operation and maintenance of this bureau are entirely too small to meet its running expenses and attend to its needs and the occurrences of the year brought home the absolute necessity of obtaining a larger appropriation, since with the annual increase in business and the many new items of expense which come up every year the degree of efficiency obtained so far surely will not be maintained if better means and more resources are not placed at our command. In this connection it is well to note the rise in the cost of materials, labor, etc.

The following list gives an idea of the difference in the price of some materials used in telegraph lines from the year 1914 to 1918:

Approximate prices.

	1914	1918
Cresosoted wood, per 1,000 feet b. m.	\$60.00	\$150.00
Wire, iron, galvanized, per cwt.	4.90	8.00
Wire, copper, per cwt.	20.00	35.00
Wire, insulated, twisted, No. 14 per M feet.	18.00	25.00
Wire, insulated, interior, twisted, cwt.	7.00	10.00
Bluestone, per cwt.	9.00	15.00
Batteries, dry, per 100.	28.00	35.00

At the beginning of this year there were 58 telegraph offices in operation; 20 of them were equipped with telegraph instruments only; 12 were equipped with telephone instruments, although they handled both telegraph and telephone service; and 25 offices were equipped with both instruments.

The office at Vieques was equipped with heliograph instruments. There were also 17 offices of the Porto Rico Telephone Co. doing telegraph service on a commission basis of 25 per cent for the company, in accordance with the terms of its franchise.

The bureau also had in operation 16 telegraph lines, ground circuit, with 1,227.4 kilometers of wire; 9 telephone lines, ground circuit, with 133.5 kilometers of wire, and 9 telephone lines, metallic circuit, with 812.8 kilometers of wire, making a total of 2,137.7 kilometers of wire.

WORK DONE DURING THE FISCAL YEAR 1918-19—NEW LINES.

The capacity of the government telephone switchboard was increased from 60 to 100 lines by adding to it two sections of 20 lines each, in order to connect the various government offices which had not been connected before on account of the original limited capacity of the switchboard. Now it will be necessary to increase the number of outside lines, as all the existing ones are already in use.

A plan has been under consideration for several years to extend this service to all departments and offices of the insular government in San Juan, but this plan has not been put into practice, on account of lack of funds. In the last session of the legislature, however, through recommendations of this bureau, a bill was presented, and it became a law, making an appropriation of \$12,000 to carry out the plan.

A new telegraph line was established between San German and Ponce (67.9 kilometers), to connect it with the existing one between San German and Mayaguez via Cabo Rojo, thus providing another line for Mayaguez, where previously there were only two, and were not sufficient to handle the business. The cost of this line was \$1,567.03, and it was defrayed from the regular budget.

Another telegraph line 2 kilometers long was built from the telegraph office at Cayey, to the naval radio station near Cayey. The cost of this line, including the telegraph instruments, was \$97.15, which amount was reimbursed to this bureau by the Federal Government.

CONSTRUCTION AND REPAIRS.

In view of the frequent troubles had with rubber-covered wires connecting the general lines to the various offices, it was decided to change them by open wires, and this was done during this year at the offices of Aguadilla, San German, Yauco, and Bayamon. This change has bettered the communication considerably.

The telegraph and telephone line between Hormigueros and Cabo Rojo was overhauled, using 12 new 3-inch by 5-inch by 22-foot creosoted pitch-pine poles. About a mile of new No. 10 galvanized-iron wire was substituted for the old wire, which was in bad condition.

Light repairs were made on the main telephone lines between Caguas and San Lorenzo, and Caguas and Aguas Buenas. A more complete overhauling of these lines, however, is necessary, and should be done in the coming year, and the present iron poles should be substituted by new wooden poles.

The telephone line between Cabo Rojo and San German was converted into a telegraph line, in order to connect it with the one between Cabo Rojo and Mayaguez, thus establishing direct telegraphic communication between Mayaguez and San German, via Cabo Rojo. This change required the installation of a new set of telegraph instruments in San German.

On account of certain differences had with the Porto Rico Railway Light & Power Co., regarding the use in certain towns of poles belonging to this company by the bureau of insular telegraph, it was decided to do away with this practice altogether, the bureau installing the necessary number of new poles for this object, and at the same time requiring the company to remove all its wires attached to poles belonging to the bureau of insular telegraph. In order to make this change, it was found necessary to use fifty-one new 5 by 5 inch by 22 foot and five 6 by 6 inch by 24 foot creosoted pitch-pine poles in Caguas; twelve 5 by 5 inch by 22 foot poles in Gurabo, and thirteen 5 by 5 inch by 22 foot poles in Juncos. Advantage was taken of this opportunity to make repairs to the local distribution lines of these towns.

The reconstruction of the general lines between Caguas and Rio Piedras and between Juana Diaz and Coamo, was started during the past year. At the same time, there was started the construction of a new telephone line consisting of a metallic circuit of galvanized-iron wire from Caguas to San Juan; and a telegraph line from Caguas to San Juan, ground circuit, of galvanized-iron wire; and also a telephone line from Juana Diaz to Coamo, consisting of a metallic circuit of copper wire.

The new telephone lines under construction are absolutely necessary to better the service, as at present a great deal of business is lost, and many complaints are made from persons who request communication, but after long waiting have to give it up because the lines are constantly busy. The new telegraph line from San Juan to Caguas is also indispensable, in order to connect it with the existing one between Caguas and Humacao, so as to establish direct communication between San Juan and Gurabo, Juncos and Humacao via Caguas. This construction and reconstruction of new lines could not be completed during the year, as the funds which had been assigned for the work became exhausted. Only 8 kilometers of the Caguas-San Juan lines and 10 kilometers of the Juana Diaz-Coamo lines were completed.

The telephone line from Cayey to Cidra was also repaired for a length of 6 kilometers, 47 old iron poles having been replaced by 5 by 5 inch by 22 foot creosoted pitch-pine poles.

OTHER IMPROVEMENTS IN THE SERVICE.

In view of the necessity of constructing new telegraph lines, it was decided to try using the existing long-distance telephone lines for both telegraph and telephone work; that is, to put in practice what is called the "composite system," and to that effect the necessary apparatus were installed in San Juan, Cayey, and Guayama, in connection with an existing telephone line. The experiment proved successful, and we have thus obtained a new direct telegraph communication between San Juan and Guayama, and even to Ponce through Cayey, and at the same time these lines are also

carrying their usual share of telephone conversations, without any interference whatever. Before this new arrangement, the Guayama business had to be relayed by the Ponce office to other points of the island.

In the month of July a telegraph office was installed in the building of the food commission, in San Juan. This new office was under the control of this bureau, but the commission paid the salaries of the operators and also provided the furniture for the office. As the building of the food commission was located near Puerta de Tierra, all messages addressed to this suburb were transmitted to this new telegraph station, and so the additional delivery charge of 10 cents formerly required for messages sent to Puerta de Tierra was eliminated. This office was closed in April, 1919, when it was no longer necessary for the food commission, but this bureau then installed an office at Stop 5½ in Puerta de Tierra, thus meeting a necessity which had been felt for a long time.

Owing to an interruption which occurred in the cable lines of the English company in September, 1918, this bureau had to take care of the business of that company between the offices of San Juan and Ponce. As the volume of business was quite large, it became necessary to work day and night, and a new set of apparatus was installed in the office at Ponce Playa, in order that two employees might work at the same time. This special service lasted eight days, and produced an income of \$937.65.

One of the most important improvements made this year was the construction of buildings in Mayaguez and Aguadilla for the exclusive use of the telegraph office. These offices were formerly housed in the municipal buildings, but these were destroyed by the earthquake of October 11, 1918. Owing to the ruinous condition of these towns after the earthquake, it was impossible to get a house or room in which to install the telegraph offices, and after making temporary installments in very inadequate places, it was decided to provide special buildings for these offices.

The two houses built are of wooden construction, and are only large enough to accommodate the telegraph offices. The experiment thus made having proved successful, since they fill all the requirements, and the cost was very moderate, it is intended now to build others in the more important towns, as the means permit, with the object of cutting down the big items of house rent, and also to avoid the expense and trouble of moving the offices from place to place, as frequently happens.

The Río Piedras office was moved to a better location.

In the Aguadilla office a permanent service was established; that is, up to 12 o'clock at night, thus putting that office on the same footing as San Juan, Ponce, and Mayaguez. This change required the employment of another operator for the night service.

The office in Carolina was also moved from the house it occupied to a better location.

The telegraph service was extended to Villalba. This office belongs to the Porto Rico Telephone Co., and the service there is rendered in accordance with the terms of the franchise of this company; that is, 25 per cent of the income from telegrams, goes to the company.

A new telegraph office connected to the Ponce office, was installed at the Hotel Melia in Ponce, which is in a building centrally located, in order to provide facilities to the public, and with a view to increase our revenues. The result so far has been quite satisfactory, and it is expected that conditions will continue to improve.

The office in Anasco, which after the earthquake was temporarily installed in an old and inadequate house was later moved into a more suitable place.

The offices of Bayamon, Gurabo, Juana Diaz, and Ponce were provided with new furniture.

In the San Juan office a new table for four telegraph sets was installed, in order to make room for the new telegraph line being built from Caguas, and also to make separate connections with the offices located at Las Marina, Puerta de Tierra, and Santurce. This change will greatly improve the service.

In accordance with recommendations made in previous years, this bureau succeeded this year in getting an automobile for its exclusive use in the inspection of lines and offices in other towns, and also to give prompt attention to breakdowns or damages in the lines as well as to the work being carried out in the island. This automobile was transferred by the food commission, where it was used for a long time. Although it is not in very good condition at present, it has been nevertheless very useful to this bureau.

EFFECTS OF THE EARTHQUAKE.

The earthquake of October 11, 1918, also destroyed the buildings where the Isabela and Anasco telegraph stations were installed, but communication was reestablished by installing the instruments in a temporary way in the places which could be found. The offices of Bayamon, Barceloneta, Ponce, and Juana Diaz had to be closed, as the buildings where they were located were dangerously damaged.

Interruptions occurred in the telegraph lines of the western part of the island, no doubt due to the heavy tension induced on the wires by the shocks. These breakdowns naturally meant a hard task for the employees in charge of the reestablishment of these offices and repairing of the lines, as well as to the operators in care of the transmission of the large number of messages which were addressed after the earthquake.

EPIDEMIC OF INFLUENZA.

Shortly after the earthquake, the epidemic of influenza made its appearance, and this calamity brought about an enormous volume of business for the telegraph service, which the bureau had to take care of under very difficult conditions. The epidemic of influenza spread rapidly through the island and many telegraph operators fell sick, 20 of them being sick at a time in some cases, all of which aggravated the difficulties.

TELEPHONE LINES.

In accordance with the franchise of the Porto Rico Telephone Co., this corporation renders certain service to the insular telegraph in exchange for stipulated compensations or privileges. One of these services consists in the transmission of messages in those towns where no telegraph stations are found; this service being done on the basis of a commission of 25 per cent of the value of messages transmitted.

From the beginning of this service, the company has been charging the 25 per cent commission on all telegrams transmitted, without discriminating between those which are classified as commercial and others which come under a different classification, and to which different rates apply.

Although this bureau objected on different occasions to this indiscriminating charge on the ground that such can not be the intent of the franchise, the company insisted in its opinion, and it was decided to take the matter to the attorney general, with a request for his opinion. The attorney general decided that all telegrams should be considered in accordance to their classification, instead as if they were all commercial messages, and that the company should charge the 25 per cent commission on the value of transmission of each message, according to the rate charged. This difference will produce an additional income to the insular telegraph of about \$100 a year.

UNITED STATES WIRELESS TELEGRAPH STATIONS.

At the present time two wireless telegraph stations are in operation in this island, one in San Juan and the other at Ensenada. Another high-power radio station is being installed at Cayey, and is now nearing completion.

During the European war these two stations were used exclusively for the transmission of official messages, but since a few months ago they have resumed handling the general business, the same as before the war. This latter change enables the insular telegraph to again derive revenue from commercial messages which was lost during the war, since the government messages were transmitted through our lines free of cost.

In May last the United States radio service decided to handle commercial service between Porto Rico, St. Thomas, Santo Domingo, Cuba, United States, etc. This arrangement will bring good revenue to this bureau, as all the telegraph service in connection with the radio service is handled through our lines.

This service was carried out very satisfactorily at the beginning, but it has been partially suspended for reasons unknown to us. It is expected, however, that once the high-power station under construction at Cayey is completed this plan will be carried out to its full extent. We are looking forward to its success, as this addition to our means of communication with the outer world will be very beneficial to the commerce of this island.

In connection with this scheme the Federal Government has requested this bureau to make direct connections between its three wireless stations through our lines, and for this purpose the legislature voted, at our request, an appropriation of \$5,000 for the immediate construction of two telegraph lines, one from San Juan to Ensenada. The materials for these two lines have already been ordered from the States.

PROJECTS FOR NEW CONSTRUCTION AND PROPOSED IMPROVEMENTS.

As a result of the recommendations made in last year's report, regarding the advisability of reducing the schedule of rates on telegraph messages in those towns where cheaper rates are charged for long-distance telephone calls, a new schedule of rates has been prepared and will soon be put in force. It is expected that with this

change the public in these towns will make a more extensive use of the telegraph service.

An encouraging prospect for the operation of this bureau during the coming year is afforded by the fact that the appropriation made by the legislature at its last session is sufficiently large to permit the carrying on of the work, employing the necessary personnel and building additional lines to properly handle the service. The main drawback in the operation of this bureau was the lack of personnel and lines to take care of the business. In the new budget an increase has been made in the number of employees authorized, as well as in their salaries, and this will enable us to retain good employees who, as has been the case during the former years, would have had to quit the service to go into more lucrative positions.

Two items of importance are included in the budget. One is that providing for the payment of the extra hours worked by the employees during the year. No compensation could be given for this work before, as no provision had been made in the budget. The other item is that which provides for the payment of relief employees. In the last budget three operators were included for this service. Experience has shown that this number is considerably below what is actually required to fill temporarily the places of those who either absent themselves on account of sickness or on vacation leave. Outside of the three operators mentioned, no other relief employees are available to replace those telegraph operators, linemen, messengers, etc., who apply for leave of absence, and therefore leaves can very seldom be granted.

Mention should also be made of two acts passed by the last legislature at the suggestion of the department of the interior, which will prove a great benefit to the island. One of these acts is the one ordering the establishment of the telegraph money-order service, which, in addition to the advantages which it will afford to the public in general, will bring additional revenues to the government. The other act is one which provides for an adequate appropriation for the betterment and extension of the telephone system in the government exchange at San Juan. At the present time not all the offices of the government are connected with this exchange, on account of the insufficient capacity of the switchboard and of the outside lines. Two different telephones are used in many offices—a government telephone and one of the telephone company—and this duplication will disappear if the improvements are carried out as already planned.

It is certainly gratifying to state that the present legislature, at its last session, gave considerable assistance for the furtherance of the telegraph service in the island. With this help better means will be at our disposal and consequently more efficiency in the service will be obtained, with corresponding larger revenues.

REVENUES AND EXPENDITURES.

Exhibits Nos. 36 and 37, appearing in the report of the auditor of Porto Rico, show in detail the income and expenditures of the bureau during the past fiscal year.

This statement shows a total of cash receipts equal to \$109,591.26, which compared to that of the previous year, which was \$96,825.98, represents an increase of \$12,765.28, while the net profit, after deducting all expenses, amounts to \$9,314.61, which is larger than last year.

If credit is given for the free and half rate business handled during the year, computing it at the ordinary rate, then the total of receipts would amount to \$126,283.14, which is \$13,110.18 larger than last year. The collection made for the total number of telegrams transmitted during the year amounts to \$72,619.67, or \$12,559.93 more than the receipts for the last year from this source.

The following summary shows the amounts of the transactions of the bureau during the year:

RECEIPTS.	
Cash receipts.....	\$109,591.26
Value of half-rate telegrams.....	7,350.49
Value of free service.....	9,341.39
	<hr/> \$126,283.14
EXPENDITURES.	
Operation of the system.....	\$39,709.73
Repair and maintenance of lines.....	10,566.92
Extension and reconstructions.....	10,449.22
	<hr/> 110,725.87
Difference.....	15,557.27

This statement shows a balance of \$15,557.27 over expenses in favor of the receipts, or \$1,807.03 larger than last year. Comparing with the total expenditures the amount of cash receipts alone—that is, deducting the value of the free and half rate telegrams—there results a loss of \$1,134.61; but if proper allowance is made for the

expenditures incurred in betterments and extensions of the system, then a surplus is obtained amounting to \$9,314.61.

The appraised value of the government telegraph and telephone system is placed at \$138,203.38 according to the last year's report of the auditor of Porto Rico, and therefore the net revenues during the year represent 79 per cent of its appraised value. Taking into account the annual depreciation, which is assumed to be one-fifteenth of the value of the property—that is, \$9,213.78, and deducting this amount from the \$15,557.27, difference of gross receipts over expenditures—a balance is obtained equal to \$6,343.49, which is the net profit for the government, or approximately 4½ per cent of the investments.

Of the 76 offices which have been in operation during the year, 43 of them were operated at a profit, in this number being included 18 towns where the business was handled by the Porto Rico Telephone Co. on the 25 per cent commission basis; and 33 offices produced a loss, taking into account only the cash receipts; but, giving credit for the free and half rate telegrams transmitted, 46 offices operated at profit, while the other showed a loss.

RECOMMENDATIONS.

The appropriation made in the budget for the coming year makes provision for an increase in the personnel of this bureau, and more funds are also assigned for the maintenance of the system as well as for the extension of new lines. The growth in the system, which is made possible by such provision, brings us to a realization of the fact that we are lacking trained operators to handle the increased business, and for this reason I would like to recommend as a suggestion that the department of education include in the program of studies of the normal school in Rio Piedras and the College of Agriculture and Mechanical Arts in Mayaguez a course of telegraphy in connection with the scientific course which is now offered in these schools, so that those students who desire to specialize in telegraphy might have a chance to do so while studying the regular course. The department of education would not need to incur an additional expense, as the department of the interior would willingly lend the services of a capable telegraph operator, who could take care of teaching this subject.

It is also recommended that the cable companies operating in the island be charged a certain percentage of the collections made at the various telegraph offices on account of messages transmitted by those companies, it being the object of this charge to compensate the government for the expense of collecting, keeping, and forwarding these funds, the accounting required, and the responsibility assumed by the government. These funds amount every year to approximately \$30,000, and therefore an additional income of \$1,500 to \$3,000 a year might be derived from this source, according to the percentage charged.

The recommendation made in previous years is also insisted on regarding the necessity of securing large and suitable quarters at the post-office building, which is located in the Marina, at San Juan, or at some other place near that location, for establishing the main central office of the bureau. This location is right in the commercial center of San Juan, and it is the proper one for the telegraph office, both for the benefit of the public as well as from the standpoint of promoting the business.

We have at present a small office in the Federal building, in which on account of the cramped quarters where it is installed only two wires can be connected. These two wires are not sufficient for the requirements of the business coming to that office, so much so that it is not unusual for that station to turn over to the central office for transmission many of the messages received, on account of not being able to take care of them, this resulting in unavoidable delays in their handling, since their forwarding to the other office is done by messengers, which necessarily takes time.

DIVISION OF HARBOR AND DOCKS.

BRIEF REVIEW OF PAST ACTIVITIES UNDER THE SPANISH RÉGIME.

Previous to 1882, all harbor works in Porto Rico were carried out under the supervision of the general government of the island through the department of public works. In Spain and in some of her colonies local harbor boards had been in existence for many years and had complete charge of all harbor works at Cadiz, Alicante, Barcelona, Malaga, Bilbao, Habana, Manila, and other ports. A harbor board was established at San Juan in 1882, in Ponce 1894 and in Mayaguez 1886. The members of these boards consisted in general of the alcalde, two or more councilmen, two shipowners or merchants, and three members of the official chamber of commerce; in San Juan the governor general was the chairman of the board.

The funds of these boards consisted of an annual grant from the general government of the island, another from the municipality, and a fee of 50 centavos (30 cents) per ton on all merchandise landed at the port. The total receipts and expenditures of these boards was as follows, the amounts being in pesos worth about \$0.60 gold:

	Receipts.	Expenditures.
San Juan, 1883-1899.....	1,091,543	1,078,190
Ponce, 1894-1897.....	85,495	57,314
Mayaguez, 1887-1899.....	290,000	.....
Total.....	1,467,038	1,135,504

The accounts of the port of Mayaguez were not reported, and the receipts are partially estimated, while the expenditures are unknown. It appears that 54,000 pesos were loaned to the government of the island and 15,000 to the national government. In 1898 the harbor board of Ponce turned over 20,000 pesos to the general government for safe-keeping, but this money was sent to Spain with other funds and was never recovered.

At San Juan considerable dredging was done and adjacent swamp lands were filled under the jurisdiction of the "Junta de Obras del Puerto de San Juan" and it had in use one endless chain dredge and one dipper dredge besides two tug boats and considerable other equipment. The board also owned several machine shops and storehouses. Low stone bulkhead walls were built along the water front for a distance of about 2,000 feet and also a small covered dock, which was in use up to 1912. The water in front of the bulkhead wall was not more than 8 or 10 feet deep and was available for small craft only. The general depth of water on the anchorage ground of the harbor was 24 feet, but there was somewhat deeper water in the entrance channel.

The harbor board at Ponce built a large iron shed for storing goods received from lighters and also a small wooden pier; it established some buoys in the harbor and complete surveys were made from which an elaborate plan was formulated for harbor works, including four large breakwaters and an extensive pier.

At Mayaguez an iron freight shed was built and a small wooden pier and a large iron pier were projected and was in course of construction at the time of the American occupation. The project was so expensive that nothing has been done since to complete the work and many of the iron piles are still in evidence. Elaborate plans were also made for the improvement of this port and sent to Spain for approval, but were never returned.

Previous to 1899 practically all of the commerce at the various ports of the island was handled by means of lighters and there were no docks capable of accommodating large vessels, although San Juan had one small covered wharf and a bulkhead wall with sufficient water for small schooners. The harbor of San Juan was well protected, but the depth at the anchorage was not over 24 feet; most of the other harbors were open roadsteads except Guanica which is small but has fair depth of water and is almost landlocked.

The Spanish government established a good system of lighthouses along the coasts of the island. In 1898 there were 13 lighthouses in working order and two were in the course of construction. After the American occupation, the lighthouse service was turned over to the Navy Department and the lights on the south side of Vieques and at Mona Island were completed largely from materials on hand.

WORK ACCOMPLISHED UNDER THE AMERICAN GOVERNMENT.

The American military government of the island abolished the various harbor boards of the Spanish régime and in February, 1899, established a board of public works which had charge of all improvements of the shore works of harbor and docks. The general dredging of harbors is done by the Federal Government as in the United States. No harbor dues were collected until the organization of the bureau of harbor and docks under an act of the insular legislature of 1902. In 1912 harbor boards were established by the legislature at San Juan and Ponce.

All shipping and pilotage at the various ports of the island is under the direction of the division of harbors and docks, and all harbor dues are collected by its employees. The chief engineer of the San Juan Harbor board also acts as the chief of this division.

The organization of the division in accordance with the legislative budget provides for a captain of the port at San Juan, Ponce, and Mayaguez; and pilots are in commission as follows: At San Juan, three; Ponce, Mayaguez, and Guanica, two each;

while Aguadilla, Arecibo, Arroyo, Fajardo, Humacao, and Vieques each have one pilot, who also acts as captain of the port.

San Juan Harbor.—At San Juan, Pier No. 1 was built by the New York & Porto Rico Steamship Co. in 1899–1900 at a cost of \$90,000. It is 80 feet wide and 420 feet long, roofed over with galvanized iron, has 27 feet of water alongside, and is used exclusively by the New York & Porto Rico Steamship Co. Pier No. 2 was completed by The Insular Dock Co. in 1908. Its dimensions are 100 by 380 feet; it is also covered and has a depth of water of 22 feet. San Antonio Dock, which was completed in 1912, is an earth-filled dock surrounded by sheet piling, and has a large shed (250 by 290 feet) for storing sugar and other merchandise. It is used exclusively by the New York & Porto Rico Steamship Co. Pier No. 5 was built by the American Railroad Co. in 1913 and is open to all commerce. It is 80 by 450 feet long, covered, and has 26 feet of water. The Porto Rico Coal Co.'s pier was built in 1916. It is used entirely for storing coal for shipping vessels.

A concrete bulkhead has been built along the water front for a distance of 2,350 feet by the San Juan Harbor board, and also a steel-covered shed 840 feet long with an area of 32,000 square feet. One portion of the bulkhead has a depth of water of 24 feet, while for the remainder the depth is 18 feet. Both bulkhead and freight shed are open to all commerce on reasonable terms.

San Juan Harbor has an area of 84.4 acres dredged to a depth of 30 feet and 18.5 acres with a depth of 25 feet; the entrance channel is 500 feet wide and has 30 feet of water. The dredging was done by the Federal Government at a cost of \$750,000, and completed in 1911. An appropriation has been made by Congress for a very considerable amount for further dredging.

Ponce Harbor.—In 1913, the municipality of Ponce completed a covered pier of concrete and steel with ample depth of water and with railroad connections. The dimensions are 110 by 325 feet and the cost was \$364,678. There are also two lines of lighters which land merchandise at small wharves provided for the purpose.

FISCAL YEAR 1918–19—SHIPPING.

The war demand for shipping during the year resulted in reducing the number of vessels arriving at the various ports of the island to the lowest point in 10 years. The total number of ships decreased 15.7 per cent and the tonnage 17.4 per cent from last year. However, for the five years since 1914, the average number of ships arriving at the island was but slightly less than for the preceding five-year period.

The total number of vessels entered during the year was 1,307 and the total tonnage was 3,148,384, not including coastwise vessels trading only between the various ports of the island. The percentage of tonnage received at each port was as follows:

Port.	Percent.	Port.	Per cent.
San Juan.....	37.4	Aguadilla.....	4.3
Ponce.....	18.6	Humacao.....	3.2
Mayaguez.....	16.7	Fajardo.....	2.5
Guanica.....	10.6	Arecibo.....	1.2
Arroyo.....	5.5		

RECEIPTS AND EXPENDITURES.

The total income for the year from all harbors of the island amounted to \$42,791.77. This was the lowest amount since 1910 and was a decrease of 7.8 per cent over last year. The greatest decrease was in the smaller ports where the collections ranged from 26 to 68 per cent of last year's. The collections at San Juan were practically the same as last year, while at Ponce and Mayaguez they were 87 and 97 per cent, respectively.

Collections at the several ports of the island during the fiscal year 1918-19.

Month.	Aguidilla.	Arecibo.	Arroyo.	Fajardo.	Vieques.	Guánica.
1918.						
July.....	\$60.80	\$0.26	\$83.97	\$63.34	.....	\$461.98
August.....	36.40	5.00	60.08	44.93	.....	33.31
September.....	75.37	10.18	57.34	49.48	\$27.77	427.47
October.....	57.37	3.40	39.26	89.22	9.26	372.97
November.....	15.56	5.00	21.32	8.64	9.25	96.10
December.....	53.82	5.00	65.55	11.58	.....	144.16
1919.						
January.....	38.40	4.74	31.89	22.60	.....	1,071.11
February.....	70.78	8.34	74.84	69.04	.45	516.00
March.....	50.23	8.49	84.60	36.04	32.33	358.93
April.....	44.29	5.09	80.51	18.92	13.16	1,226.05
May.....	46.39	30.77	68.58	74.50	10.17	516.09
June.....	93.94	35.21	146.46	17.08	.....	419.06
Total.....	632.43	120.25	814.34	495.47	102.30	5,577.21

Month.	Guayanilla.	Humacao.	Mayaguez.	Ponce.	San Juan.
1918.					
July.....	\$8.54	\$120.73	\$559.27	\$963.29	\$1,882.49
August.....	9.26	17.24	194.37	598.40	1,761.06
September.....	.....	23.81	218.29	516.09	1,969.41
October.....	.....	34.84	169.32	363.61	1,390.86
November.....	.....	23.66	127.91	699.35	1,358.51
December.....	.....	.....	197.18	515.40	1,378.26
1919.					
January.....	9.48	12.28	220.07	814.93	2,435.64
February.....	13.16	54.69	580.57	494.58	2,617.07
March.....	6.27	69.55	351.04	842.21	3,022.61
April.....	12.75	83.02	212.80	607.21	2,327.86
May.....	17.08	40.88	227.71	455.76	2,082.86
June.....	.....	48.00	193.36	830.83	1,612.79
Total.....	76.54	528.70	3,261.89	7,391.66	23,780.89

GOVERNMENT PIERS.

Owing to the fact that no appropriation has been made by the legislature in recent years, most of the government piers at small ports of the island are in bad condition. No government piers are located at Fajardo, Humacao, Arroyo, Guánica, Guayanilla, and Arecibo, but private piers have been built at all of these ports for the landing of lighters and small boats. At Aguadilla there are no piers, and on that account all merchandise is landed by lighters.

At Ponce, the large covered pier built by the municipality offers excellent facilities for the ocean-going steamers. This port also had two small piers owned by the insular government, but one of them was completely destroyed by the earthquake of October 11, 1918, and the other was badly damaged and the office of the captain of the port of Ponce was also badly damaged by the earthquake. At Mayaguez there were two small piers owned by the government, one for the landing of passengers and one for freight; both were practically destroyed by the earthquake and the office of the captain of the port, which was comparatively a new building, was badly damaged. The tidal wave which accompanied the earthquake caused most of the damage to the piers. They were repaired in a temporary manner, as it is the intention to replace them with concrete in the near future.

IMPROVEMENTS.

The only harbor improvements constructed by the government during the year was the extension of the bulkhead at San Juan, details of which are given in the report of the San Juan Harbor board. Private companies reconstructed the smaller pier at Fajardo and a new pier for loading sugar was built at Arroyo; both structures are of concrete and are only available for lighters.

LIGHTERAGE SERVICE.

At all of the ports of the island except San Juan and Ponce it is necessary to unload vessels by means of lighters and they are also still in use to a considerable extent in both San Juan and Ponce, although these ports have got pier facilities. At Ponce lighters are used to transport cargo from that port to the smaller harbors which are in the vicinity. In the early part of the year the public service commission issued an order compelling all lighterage companies to procure a franchise; 18 applications for such franchises were presented to the commission and 16 franchises were granted as follows: At San Juan 1, Ponce 4, Mayaguez 1, Aguadilla 4, Jobos 1, Arroyo 2, Fajardo 1, Rincon 1, Humacao 1. The owners of lighters are required to file a schedule of rates and are now responsible to the public service commission.

DREDGING SAN JUAN HARBOR.

The bids received last year by the Federal Government for dredging San Juan Harbor were rejected and new bids will be opened on July 28. The additional anchorage ground to be provided is very much needed and the filling of the swamp lands bordering the harbor as contemplated will be of the greatest benefit to the port.

When it is considered that San Juan is almost directly in the path of ocean vessels bound from Europe to the Panama Canal or from New York to the west coast of South America, it is evident that the proper improvement of this port is of the utmost importance. Now that the war is over this traffic may be expected to develop in large proportions, and the great need of the harbor will be for a larger anchorage ground with a depth of at least 30 feet. If San Juan is to obtain its natural share of this world commerce it is imperatively necessary that the dredging to be undertaken by the Federal Government should be commenced as soon as possible.

RECOMMENDATIONS.

The last legislature appropriated \$15,000 for maintenance and reconstruction of harbor structures at ports other than San Juan, and with these funds it is intended to reconstruct the small landing piers at Ponce and Mayaguez with concrete and to remove some obstructions on the beach at Aguadilla which appeared after the earthquake.

All of the ports of the island should be provided with proper landing piers for lighters and they should have some facilities for removing heavy cargoes and for storing merchandise after landing. The income received from harbor dues should be applied to port improvements, and if this was done systematically each year all of the ports could be supplied with proper facilities. The income for harbor dues since the American occupation has averaged \$39,848 per year, and for the last 10 years the average has been \$47,812; the appropriation for salaries and maintenance of the bureau have generally been less than \$10,000 per year. Since 1912, however, the harbor dues of San Juan have been turned over to the San Juan Harbor Board and go into the sinking fund for the payment of bonds issued for harbor improvements.

Harbor dues.

Year.	San Juan.	Ponce.	Mayaguez.	Other ports.	Total.
1903.	(1)	(1)			\$23,362.68
1904.	(1)	(1)			21,369.05
1905.	\$17,945.55	\$3,248.27	\$1,912.83		23,106.65
1906.	20,828.87	3,614.72	2,782.57		27,225.96
1907.	25,283.72	4,882.43	3,256.16		33,422.31
1908.	24,419.40	3,481.46	2,904.31		30,796.17
1909.	26,394.40	4,523.10	4,102.41		35,019.91
1910.	26,331.92	5,249.66	4,198.26	\$2,808.29	38,678.13
1911.	36,122.62	5,248.79	4,082.28	5,645.82	50,999.51
1912.	36,839.03	5,280.11	4,407.03	7,434.97	53,971.14
1913.	27,651.26	5,480.22	4,431.26	7,251.06	44,823.80
1914.	25,372.48	6,351.80	4,471.18	11,281.71	47,477.17
1915.	26,443.71	6,554.52	3,751.55	13,162.71	48,911.49
1916.	23,980.91	7,950.22	3,549.33	13,917.41	48,397.87
1917.	27,757.56	8,541.70	3,632.11	15,962.07	55,892.44
1918.	23,904.15	8,493.15	3,386.12	12,498.50	48,181.92
1919.	23,780.89	7,391.15	3,261.89	8,357.33	42,791.77

¹ Not given separately

Number of vessels and tonnage entered ports of Porto Rico, year ended June 30, 1919.

Vessels.	San Juan.		Ponce.		Mayaguez.		Arroyo.	
	Num-ber.	Gross tons.	Num-ber.	Gross tons.	Num-ber.	Gross tons.	Num-ber.	Gross tons.
American:								
Steam.....	285	911,107	172	508,331	186	508,359	63	163,529
Sail.....	43	20,579	16	6,783	10	2,816	4	3,328
Foreign:								
Steam.....	82	224,338	21	61,834	10	14,026	2	3,910
Sail.....	26	5,494	22	2,711	3	223		
Total.....	436	1,161,518	231	579,659	209	520,424	69	170,762

Vessels.	Humacao.		Fajardo.		Aguadilla.		Arecibo.	
	Num-ber.	Gross tons.	Num-ber.	Gross tons.	Num-ber.	Gross tons.	Num-ber.	Gross tons.
American:								
Steam.....	38	92,887	29	75,207	49	119,280	19	38,792
Sail.....	5	1,563	4	1,831	6	1,797		
Foreign:								
Steam.....	2	3,910			8	11,967		
Sail.....	5	648	2	292				
Total.....	50	99,008	35	77,330	63	133,144	19	38,792

Vessels.	Guanica.		Guayanilla.		Vieques.	
	Num-ber.	Gross tons.	Num-ber.	Gross tons.	Num-ber.	Gross tons.
American:						
Steam.....	177	328,037	7	18,719	8	19,380
Sail.....	2	1,521			1	90

RECAPITULATION.

Vessels.	Number.	Gross tonnage.
American:		
Steam.....	1,033	2,778,728
Sail.....	91	49,308
	1,124	2,819,081
Foreign:		
Steam.....	125	319,965
Sail.....	58	9,368
	183	329,253
Total.....	1,307	3,148,384

Review of the activities and progress in the port of San Juan for the past 20 years.

In going back over the history of the port to Spanish times, the mind almost unconsciously reverts to the richly-laden treasure ships of the "conquistadores" and to the gallant, even if piratical, sea rovers of the sixteenth and seventeenth centuries, and the old port undoubtedly had its full share of both of them. The later Spanish organization of port improvements was very similar to that of the present time. The board of harbor works of the port of San Juan was established under the Spanish régime in 1882. The Governor General acted as president, while the vice chairman was the vice president of the provincial deputation. The other members were: The city

councilmen of San Juan, two members of the board of agriculture and commerce, four merchants and shipowners, the captain of the port, and the engineer director of the works. Provision was made by royal order for an annual subsidy of 25,000 pesos (\$15,000) from the general budget of the island, 8,000 pesos from the provincial deputation, and 2,000 pesos from the city of San Juan. It was further provided that a tax of fifty centavos (\$0.30) on each ton entered shall be collected by the customhouse. All of these funds were at the disposal of the board, and it was authorized to contract loans and to sell lands which it might reclaim.

During its administration from the year 1883 to 1899 this board collected 1,091,543 pesos and disbursed 1,078,190 pesos. About 83 per cent of the total expenditures of the board was for dredging and the rest went for machine shops and sheds, beacons, buoys, a small landing wharf, and for administration and miscellaneous items. Incidental to the dredging about 40 acres of land were reclaimed, part of which was sold for about 8 pesos per square meter. This land is now very valuable and is probably worth more than all of the expenditures of the old board.

The old Spanish harbor board was dissolved in 1899 by an order of Gen. Henry, then in command of the United States forces in Porto Rico, and all harbor work was placed under the department of public works, but all dredging, buoys, lights, and lighthouses were undertaken by the Federal Government, which has expended since 1899 the sum of \$777,500 in dredging and maintaining the harbor of San Juan, providing a 30-foot channel and a considerable anchorage ground of the same depth of water. It also contemplates spending more than \$1,000,000 for the same purpose in the near future. The harbor board has spent nearly \$600,000 for shore improvements, as set forth above, and five piers for the accommodation of shipping have been built by private corporations, at a cost of more than \$500,000.

Operating receipts and disbursements of San Juan harbor board for year ending June 30-

[Does not include interest of premium on bonds.]

	1912-13	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19
RECEIPTS.							
Mooring charges.....						\$1,326.42	\$3,068.95
Wharfage fees.....						642.13	12,624.77
Storage.....					\$2,771.57	6,225.87	19,337.86
Rent.....						750.00	3,084.40
Other charges.....							1,344.60
Total receipts from bulkhead.....					2,771.57	8,944.42	39,450.58
Harbor dues.....	\$39,165.27	\$25,372.48	\$25,485.21	\$23,960.91	27,777.56	22,455.34	20,954.03
Total receipts.....	39,165.27	25,372.48	25,485.21	23,960.91	30,549.13	31,399.76	60,404.61
DISBURSEMENTS.							
Operating expenses.....	386.50	195.00	316.60	385.00	422.07	3,831.74	14,904.53
Interest.....	4,000.00	8,000.00	16,000.00	20,000.00	20,000.00	24,000.00	24,000.00
Total disbursements.....	4,386.50	8,195.00	16,316.60	20,385.00	20,422.07	27,831.74	38,904.53
Balance.....	34,778.77	17,177.48	9,168.61	3,575.91	4,127.06	3,568.02	21,500.08

THE SAN JUAN HARBOR BOARD, FISCAL YEAR ENDED JUNE 30, 1919.

The San Juan Harbor board was established by an act of the legislature of 1912; the commissioner of the interior acts as chairman of the board; the membership is as follows: The alcalde of San Juan, Mr. Waldemar E. Lee (whose term has lately expired), Mr. Edward Ferrer, and Mr. F. Vall Spinosa. Twelve regular and eight special meetings were held during the year. The board controls all harbor and terminal improvements at San Juan except the harbor dredging, which is done by the Federal Government.

WORK DONE BY THE BOARD.

Nearly \$600,000 has been expended by the harbor board in building a concrete bulkhead extending along the water front for a distance of 2,350 feet and a steel freight shed adjacent to the bulkhead; the shed is 840 feet long and from 32 to 52 feet wide. Both structures are of the most permanent character and are built of fireproof materials.

A marginal street of ample width has been built along the bulkhead and water front for a distance of one-half mile, and necessary connecting streets have been constructed as well as marginal railroad tracks, giving ample facilities for the transfer of cargo from ship to railroad. Some dredging has been done along the bulkhead in order to obtain a depth of water of 24 feet in front of the bulkhead shed and 18 feet other points.

The first contract was let by the board to the Carlin Construction Co. in 1913, for building the concrete bulkhead along the entire western portion of the water front. This work was delayed for various reasons and was finally stopped at a point 75 feet east of Pier No. 2 on account of an injunction obtained by the Insular Dock Co., who objected to the fact that the bulkhead line cut off a cut 20 feet of the northerly end of their shed. The action was finally settled by the payment of \$15,000 by the harbor board to the Insular Dock Co., it being agreed that the portion of the pier to the north of the bulkhead line should be removed by the company, and that the bulkhead should be extended through the pier site. The work of extending the bulkhead to the east side of Pier No 1 was let to F. Benitez Rexach in 1918 and is now practically completed. The construction of the marginal street has proceeded as fast as the bulkhead was completed and has been built with concrete curbs and gutters and macadam paving with an asphalt top coating. The freight shed was built by contractor Jesus Benitez and completed in March, 1917.

FUNDS OF THE HARBOR BOARD.

Bonds have been sold for the purpose of construction as follows. They all bear interest at the rate of 4 per cent.

In 1912, due in 1937.....	\$100,000
In 1914, due in 1939.....	200,000
In 1915, due in 1940.....	200,000
In 1917, due in 1942.....	100,000
Total.....	600,000

The board also receives all harbor dues of the port of San Juan, as well as storage and wharfage dues collected at the bulkhead and freight shed; these receipts are turned over to a sinking fund for a repayment of the bonds, after deducting the amount necessary for maintenance and current expenses. This now amounts to \$111,782, having increased \$21,500 during the past year after paying all current expenses and interest, amounting to \$24,000. This large and rapidly growing fund draws only bank interest on deposits, which is appropriated to the general use of the insular government and does not go into the sinking fund. The receipts of the board for the year were as follows:

Harbor dues.....	\$30,954.03
Moorings and wharf charges.....	15,653.72
Storage.....	19,337.85
Other receipts.....	4,429.00
Total.....	60,404.61

The expenses for maintenance and operation were:

Maintenance.....	\$2,540.92
Operation.....	12,354.61
Interest.....	24,000.00
Total.....	38,904.53

The financial details are fully set forth in statement attached.

OPERATION OF THE BULKHEAD AND SHED.

The freight shed, located along the easterly end of the bulkhead, has an available floor space of 32,000 square feet and a clear height of 20 feet. The loading and unloading of cargo is done by the consignees, and the harbor board does not employ a permanent force of men to handle merchandise. The food commission occupied about one-third of the shed for the entire year, but vacated on June 30. It paid only the nominal rental of \$150 per month. The quartermaster of the United States Army occupied one-third of the shed, paying no rental until August, 1918. They vacated on February 15, 1919. It will be seen that for the greater part of the year only one-third of the freight shed was available for profitable storage purposes; notwithstanding this limited use of the shed, the income from the bulkhead and freight shed for the year was \$38,105. It is evident that a much larger income can be expected from this source in the future. For the first half of the year, when only about one-third of

the shed was available, the receipts from this source amounted to \$10,990, while the latter half of the year these receipts were \$27,115. Most of the increase was in storage fees, which increased from \$3,098.91 for the first half of the year to \$16,238.95 during the last six months.

In this the first complete year of operation of the bulkhead and freight shed, the income from this source alone has been sufficient to pay all maintenance and operating expenses, and the surplus was more than sufficient to pay the interest on the entire indebtedness of \$600,000. The cost of the freight shed and bulkhead, including the dredging and administration, but excluding the recent bulkhead extension, was \$448,323.92, and the net income received from them was \$24,546, or more than 5 per cent on the cost. The complete cost of the bulkhead shed alone, including administration, was \$81,412, and the income, storage, and rent was \$22,422.26, which is 27.5 per cent on the cost. The maintenance and operating costs for the freight shed have not been kept separately, but if one-half of these costs are charged to the shed there remains a net income of \$15,048, which is 18.4 per cent of the cost of the shed.

The wharfage charges are 1 cent per 100 pounds or cubic foot for the covered portion of the bulkhead. The storage charges vary with the merchandise, but in the majority of cases they amount to about 2 cents per 100 pounds per fortnight. The original schedule of charges was revised by the board during the year and the new schedule was put into effect on July 1, and a considerable reduction was made in many items.

The extension of the bulkhead from a point 75 feet east of Pier No. 2 to the east side of Pier No. 1 was let to Mr. F. Benitez Rexach on August 20, 1918, and it is now completed with the exception of the asphalt-block paving. The delay is due to the fact that the vessel loaded with the asphalt blocks was wrecked off the coast of Cuba and it has been very difficult to get space for another shipment.

The bulkhead is similar to that already built, consisting of a concrete deck paved with asphalt blocks and supported on 50-foot concrete piles, with concrete sheet piles to hold back the fill and roadway. The width of the bulkhead is 30 feet, and it is raised 15 inches above the adjoining roadway, except in front of Pier No. 2, where a sloping roadway approach is provided. The cost of the completed work will be \$49,620, which amounts to \$146 per linear foot, the total length being 342 feet. A considerable portion of this cost was due to the rearrangement of tracks and approaches to Piers No. 1 and No. 2.

The roadway along the newly-completed bulkhead was constructed under a supplementary contract with Mr. Benitez Rexach, with concrete curbs and gutters and macadam paving surfaced with asphalt. The cost of the roadway will be \$6,923.60, and this includes some repairs and reconstruction which were necessary at Pier No. 1. This completes a 60-foot marginal street along the entire water front from the east end of the bulkhead shed to Pier No. 1, and, together with the bulkhead, constitutes a most substantial improvement to the port of San Juan. It is the first complete step toward the still greater improvements that must be made in the port if it is to be an active competitor for the traffic that sooner or later is bound to be attracted to these regions by the Panama Canal. The growing trade between North and South America should also bring many vessels to this port if adequate facilities are offered.

The streets known as C and D Streets are being paved with macadam. They are important approaches to the water front. The work is being done by administration, using prisoners for labor. The stone is furnished by the American Railroad Co. in consideration to the improvement to their property. About 2,000 cubic yards of filline has been placed along the proposed roadway to San Antonio Dock, and it is the intention of the board to complete this much-needed street in the near future.

It was necessary to make extensive repairs to the floor of the bulkhead shed owing to the very considerable settlement which has developed. The floor is of asphalt blocks, laid on a concrete base on a fill of from 18 to 25 feet in depth, and although great care was taken in compacting this fill the heavy loading on the floor produced a settlement of from 8 to 12 inches. The asphalt blocks are taken up, the refilling is made with sand, and the blocks are relaid. As some further settlement is to be expected, it is not considered advisable to relay the blocks on concrete. The roof of the bulkhead shed, which is of prepared-roofing material, has needed considerable attention during the year, and it seems likely that a new and more substantial roof covering will be needed in the near future.

Financial statement, construction account for the year.

Amount on hand in the construction fund July 1, 1918.....	\$99,947.50	
Premium on bonds.....	98.66	
		100,036.45
Construction expenditure:		
Administration and supplies.....	\$1,925.59	
Surveys, inspection, and drafting.....	2,550.00	
Advertising and printing.....	355.00	
Townshend Plaza.....	459.55	
Extension of bulkhead under contract of Aug. 20, 1918.....	37,180.67	
Paving C and D Streets by administration.....	1,332.00	
Road to San Antonio Dock, by administration.....	347.20	
Insular Dock Co. pier No. 2.....	15,000.00	
Total expenditure for construction.....		59,150.01
Balance on hand in the construction fund.....		40,886.44
Receipts from operation:		
Stream charges.....	541.94	
Dock charges.....	18,324.96	
Licenses of harbor craft.....	2,087.13	
		20,954.03
Mooring charges.....	3,058.95	
Wharfage.....	12,624.77	
Storage.....	19,337.86	
Rent.....	3,064.40	
Carting and water.....	1,344.60	
		39,450.56
Total bulkhead and shed receipts.....		60,404.61
Operating expenses:		
Salaries, fees to members.....	6,283.60	
Labor, handling merchandise, etc.....	953.47	
Carting.....	1,328.00	
Supplies, office fixtures, etc.....	3,789.54	
Total operating expenses.....		12,354.61
Maintenance charges:		
Labor road ways.....	211.57	
Repairs to bulkhead shed and floor.....	1,021.34	
Repairs to fender piles.....	51.00	
Repairs to bulkhead.....	1,266.01	
Total maintenance.....		2,548.92
Total operating and maintenance.....		14,903.53
Transferred to San Juan Harbor trust fund.....		45,500.05
Total.....		60,404.61
San Juan Harbor fund—trust fund:		
Balance July 1, 1918.....	90,252.78	
Transferred from harbor dues.....	23,780.99	
Transferred from operating receipts.....	21,719.19	
		135,752.96
Paid interest on \$600,000 of bonds.....		24,000.00
Balance in fund June 30, 1919.....		111,752.96

Considering the fact that the harbor dues received from the port of San Juan were the lowest since 1906, and that this was the first year of operation of the entire bulkhead plant, the financial showing is considered very encouraging and indicates that not only will the harbor board be able to meet all of its present obligations, but that it will be possible to make additional loans if found to be necessary for the improvement of the harbor in the future. The reduction in harbor receipts was entirely due to the shipping conditions during the war.

CONSTRUCTION.

Total expenditures of the harbor board to June 30, 1919.

Administration.....	\$15,959.64	
Drafting.....	13,748.72	
Surveys.....	2,018.49	
Inspection.....	25,126.57	
Supplies, advertising, and printing.....	2,635.20	
Unexpendable property.....	2,116.18	
		\$61,604.80
Construction of bulkhead, contract of 1913.....	325,343.66	
Bulkhead extension, contract 1918.....	37,180.67	
Marginal street paving, contract.....	29,894.02	
Marginal street paving, administration.....	1,679.20	
Dredging, contract 1915.....	19,440.31	
Bulkhead shed, contract 1915.....	74,472.45	
Other work done.....	459.55	
		488,469.86
Total constructed to date.....		550,074.66

San Juan bulkhead, wharfage and storage for year ending June 30, 1919.

	Quantity.	Unit.	Tons.	Cost.
WHARFAGE.				
Alcohol.....	4,514	Barrels.....	1,097.4	\$450.06
Bags, empty.....			502.2	145.41
Barrels, empty.....	14,997	Barrels.....	628.1	786.06
Cattle and horses.....	280	Head.....	117.6	10.85
Cement and lime.....	4,578	Barrels.....	910.5	133.46
Charcoal.....			174.9	18.06
Coal.....			8,385.8	922.73
Coconuts.....			469.6	69.01
Coffee.....			5,532.0	549.14
Dry goods.....			272.1	80.38
Fertilizer.....			6,316.1	674.59
Flour and meal.....			171.0	18.75
Groceries.....			1,868.5	297.50
Hardware.....			543.5	97.39
Honey.....	2,166	Barrels.....	603.3	60.62
Leather and hides.....			22.7	2.76
Lumber.....	10,347,461		20,610.8	4,264.59
Machinery.....			565.4	111.34
Molasses.....	9,684	Barrels.....	3,053.9	307.91
Oils and gasoline.....	2,094,370	Gallons.....	8,186.3	2,056.00
Rice.....	16,857	Bags.....	843.0	101.26
Salt.....			755.1	102.68
Sundries.....			1,220.2	458.70
Tobacco.....			1,224.9	890.06
Total wharfage.....			61,809.6	12,592.91
STORAGE.				
Army.....	38,517	Cubic feet.....		2,311.02
Alcohol.....	10,894	Barrels.....	2,178.8	2,861.36
Barrels, empty.....	15,829	do.....	396.0	349.18
Coconuts.....			640.1	248.40
Flour, meal.....			522.6	220.25
Groceries and provisions.....			789.2	356.37
Hardware, metals.....			484.7	216.45
Lumber.....	3,206,620	Feet b. m.....	6,412.8	1,587.99
Machinery.....			306.6	467.92
Molasses.....	1,675	Barrels.....	502.5	100.50
Rice.....			34,010.4	7,203.29
Sundries.....			1,217.6	1,060.96
Tobacco.....			1,739.1	2,379.26
Total storage.....			49,200.4	19,363.00
Rent.....				3,050.00
Total.....				37,005.91

IRRIGATION—BRIEF HISTORICAL ACCOUNT.

Irrigation has been practiced in Porto Rico for many years, especially along the dry coastal plains of the south coast, where there is a pronounced dry season of several months duration and it is impracticable to raise crops without irrigation. Practically the only irrigated crop is sugar cane. Just when the first utilization was made is not

known, but the oldest recognized concession, according to the archives of the department, was granted in February, 1841, for the utilization of water from the Portuguese River near Pence. At about this time there seems to have been an impetus given to agriculture and especially to the cane industry, for within the next ten years no less than 58 water concessions were granted for the irrigation of lands between Arroyo and San German.

An additional incentive to irrigators was offered by the government in 1853, when a royal order proclaimed the exemption, for a period of ten years, from the payment of taxes on the increase in value of properties and crops due to irrigation.

These early concessions were granted by the local authorities, and as a rule the amount of water to be used was not specified, and sometimes neither the amount of irrigable land nor the purpose for which the water was to be used were mentioned in the grant.

In 1866 the law of waters which had been in force in Spain was made applicable to Porto Rico, and the control and regulation of waters was placed under the inspection of public works. Since that time more or less complete records have been kept of all water concessions granted, and the central government has exercised more or less control over the use of water, but owing to lack of data regarding many of the old concessions no close estimate of the total amount of land in Porto Rico actually under irrigation can be made. It can be said, however, that in those districts where irrigation is necessary practically all of the ordinary flow of the rivers was appropriated many years ago, and all land that could be furnished water at reasonable expense was put under irrigation.

All irrigation works constructed previous to the American occupation were built by private parties and were simply diversions of the river flow. Although some studies were made about 1871 for a general irrigation system on the Bucaná River, nothing further was done in the matter.

The most important irrigation work projected during the time of the Spanish Government was for the diversion of the waters of the La Plata River near Carite, through a tunnel to the southern watershed, to be used for the irrigation of the plains from Arroyo to Salinas, a concession for this purpose having been granted in November, 1866. An English engineer, Mr. E. B. Webb, is credited with having discovered the possibilities of this development. The project was finally approved by the government on January 26, 1893, and it was stated at that time that 3,000 liters per second could be diverted at Carite and that 8,000 hectares of land could be irrigated. The government offered to guarantee 8 per cent on the investment to anyone who could undertake and complete the project, but nothing further was accomplished until the insular government undertook the construction of the general irrigation system on the south coast, about 15 years later.

UNDER THE AMERICAN GOVERNMENT.

In 1907 a law was enacted appropriating \$4,000 for studying methods of irrigating the cane lands of Arroyo, Guayama, and Salinas, and in 1908 an additional \$25,000 was appropriated for a more complete survey.

As a result of these investigations the legislature in September, 1908, passed the public irrigation law authorizing the construction of an irrigation system, creating an irrigation district, and providing for the sale of \$3,000,000 of bonds for construction purposes. An additional issue of \$1,000,000 was authorized in 1911. In 1913 the law was amended providing for a temporary and permanent irrigation district. In 1914 another issue of \$1,700,000 of bonds was authorized making a total of \$5,700,000.

The law provided for an irrigation commission whose duties were to fix the boundaries of an irrigation district, and select the lands which were to be included in a temporary irrigation district. After this district had been in operation about three years the commission was to fix the boundaries of a permanent district and include therein such lands as in their opinion could be furnished in a fair average year with the standard amount of water, 4 acre feet per acre per annum, and would receive a benefit greater than the burden imposed by law on the included lands. The cost of construction, operation, and maintenance was to be paid by a tax levied on the included lands. This tax was practically limited by the law to \$15 per acre per annum.

In case the annual tax was not sufficient to pay the costs of operation, maintenance, interest, and the principal due on outstanding bonds, in any year, refunding bonds could be issued to pay for the difference, provided that the total amount of refunding bonds outstanding at any time should not exceed the total amount of bonds redeemed.

The irrigation district extends from the Patillas River on the east to the Jacaguas River on the west, and includes a strip of land about 40 miles long extending from the foothills to the sea.

The system as constructed consists of storage reservoirs on the Patillas, Coamo, and Jacaguas Rivers near the south coast and at Carite on the La Plata River, a stream of the northern watershed. This latter river and the Toro Negro River are diverted by means of tunnels to the southern watershed, the waters of the Toro Negro River being stored in the reservoir formed at Guayabal on the Jacaguas River.

The difference in elevation between the outlet of the Carite Tunnel and the Guamaní River, amounting to 760 feet, is utilized to develop 1,400 kilowatts of hydroelectric power, which is distributed throughout the irrigation district and used for lighting and power purposes. Another small reservoir was built at Melania to store flood waters from the Guamaní River. Three main canals, with an aggregate length of about 67 miles and about 60 miles of laterals, deliver the water to the individual land lots.

The construction was practically completed in 1914 and the temporary district was formed on September 1, 1914, with a total area of 23,619.30 acres of included lands, of which 20,771.97 represented the net taxable area, and 2,847.33 acres were allowed as credits on relinquished water concessions. Provision was also made for furnishing water to nonrelinquished concessions representing an area of 6,820.18 acres, so that the total area furnished with water under the temporary district was 30,439.48 acres.

The permanent district was formed on July 1, 1917. The areas included being as follows:

	Acres.
Net taxable area.....	23,640.78
Credits for nonrelinquished concessions.....	3,111.72
Total included.....	26,752.50
Lands not included but which are furnished with water as the result of an appraisal of their water concessions.....	6,477.08
Total area furnished with water from the canals of the irrigation system.....	33,230.08

The total cost of construction of the irrigation system, including interest during construction, was about \$4,800,000, or a little over \$200 per acre for taxable land included.

A description of the irrigation system with illustrations of various structures is given in the report of the governor for the year 1914, and an account of the operations for the past year are given in another part of this report under the head of "Porto Rico irrigation service."

In 1917 the legislature authorized an issue of \$200,000 of bonds for the enlargement of Pitillas Reservoir and the extension of the hydroelectric system. These bonds were sold this year and the work will be started at once.

The irrigation system has proven a great success, and has been the salvation of the planters in that section of the island, for two of the driest years in the history of the island occurred during the existence of the temporary district, and without the water available for irrigation many planters would have been ruined financially. As it is this district is the most prosperous on the island.

NEW IRRIGATION PROJECTS.

The investigation of certain new irrigation projects was authorized by the acts of the legislative assembly, approved April 13, 1916, appropriating \$20,000 for the purpose of making a study of the irrigation of the lands in the districts of Ponce and Juana Diaz, and \$8,000 for the study of methods to irrigate the lands of the Lajas Valley, utilizing waters of the San German River, and the lands in the municipality of Isabela, utilizing waters from the Guajataca River. In April, 1917, an additional appropriation of \$12,000 was made to continue the investigations in the Lajas and Isabela districts.

The legislature passed an act approved February 21, 1918, appropriating \$8,000 to complete the investigations for irrigating the lands of the Lajas Valley and the lands in the vicinity of Isabela, but owing to the lack of funds in the insular treasury this appropriation did not become available. In order that the investigations might be completed, a transfer of \$2,000 was made from the appropriation for salaries, office of the commissioner of the interior, and the governor of Porto Rico authorized a transfer of \$3,200 from the funds at his disposal to this appropriation, making a total to date of \$25,200 for work in the district of Lajas and Isabela.

The investigations in the Ponce-Juana Diaz district revealed the fact that all of the ordinary flow and a large part of the flood flow of the rivers of this district had already been appropriated; that practically all land that could be irrigated by gravity from this river was already under irrigation; and that the cost of constructing storage reservoirs to utilize the remainder of the flood waters would be prohibitive, if the cost was to be borne by the relatively small area that could be taxed for this purpose. The project was not, therefore, considered feasible.

Favorable reports were made on the projects for the irrigation of the lands of the Valley of Lajas and the lands in the vicinity of Isabela and Aguadilla, as described in last year's annual report.

Bills providing for the construction of both of these projects were introduced in the last legislature, and the legislature gave its approval to the Isabela project by passing laws providing for the construction of an irrigation system to irrigate the lands of Isabela and Aguadilla (estimated to be about 15,000 acres) and authorizing the issue of \$3,000,000 of bonds for construction. This law will take effect in the latter part of September, and it is the intention to proceed at once with the final location surveys and the preparation of plans. It is estimated that the project can be completed in four years.

PORTO RICO IRRIGATION SERVICE—IRRIGATION SYSTEM.

WATER SUPPLY.

General weather conditions for the past year were very favorable. The average rainfall in the irrigation district was 63.09 inches, or about 6 inches above the average for the past nine years, and with the exception of the months of February and March, which were unusually dry, the rains were fairly well distributed throughout the year.

The total river flow was somewhat above the average, being about normal in the eastern division and above normal in the western division. There were no excessive floods, but some water was wasted over the spillway at all reservoirs, except Carite. On January 1, the combined available storage in all reservoirs amounted to 29,719 acre-feet as compared with 5,526 acre-feet available on the same date of the previous year.

There was also an increase in the ground water supply available for pumping, owing to the increased elevation of the water table in the district, due to the thorough soaking of the soil by the heavy rainfall. The monthly precipitation and the flow of the streams entering the various reservoirs are given in Tables Nos. 1 to 2-D, inclusive.

OPERATION.

The total acreage selected by the irrigation commission for inclusion in the permanent irrigation district, as of July 1, 1917, was 26,752.5 acres. As a result of the appeals to the courts from the decision of the irrigation commission, either by the land-owners or by the people of Porto Rico, various changes have been made, some land lots being excluded and other areas included, with the result that the total area included at present amounts to 26,939.70 acres. By January 1, 1919, water had been offered for delivery to all but 76 acres of the area included, of which 69 acres represent a tract against whose inclusion an appeal was taken to the Supreme Court. The included areas under different canals and the dates when water was delivered or offered for delivery are shown in Table No. 3.

During the past fiscal year the full standard of 4 acre-feet per acre was delivered to all lands in the district except those under the Guamani Canal, which, on account of the shortage of water in Carite Reservoir at the beginning of the fiscal year, received but 3.70 acre-feet per acre. In addition to the appurtenant water, a total of 2,130 acre-feet was offered to lands under the Patillas Canal, to make up for the shortage in the last half of the previous fiscal year.

The standard of 4 acre-feet per annum was the amount fixed by law for the formation of the irrigation district, but the law also provides "that should it appear at any time, after the establishment of the district, that the supply of water is insufficient to furnish each acre in the district the full standard amount of 4 acre-feet, then each acre in the district shall receive its proportionate share of the amount available." As the dry season occurs in the last half of the fiscal year, and shortages in deliveries can generally be made up only in the rainy season, or in the first half of the next fiscal year, the deliveries of water should be based upon the calendar year. Every effort is made to deliver the full standard amount during the calendar year but at the beginning of the new year, after the rainy season is over and when it becomes necessary to draw from storage, past deficits which are due to a shortage in the available water supply during the previous calendar year must be dropped, and the new year begun with a clear slate.

Table No. 4 gives the amount of water delivered each month, including sales of surplus water, and the amount offered for delivery but not accepted, the total amounting to 141,104.26 acre-feet, as compared with 129,478 acre-feet for the previous fiscal year.

SALE OF WATER.

The sale of water during the year was as follows:

	Domestic.	Filtration.	Class II.	Total.	Value.
	<i>Acres-feet.</i>	<i>Acres-feet.</i>	<i>Acres-feet.</i>	<i>Acres-feet.</i>	
First quarter.....	82.11	318.30	.....	400.41	\$529.49
Second quarter.....	95.43	626.84	1,300.73	2,023.00	5,965.24
Third quarter.....	82.65	572.23	191.80	846.68	1,579.32
Fourth quarter.....	145.04	623.09	643.62	1,411.75	3,100.13
Total.....	405.23	2,141.06	2,136.15	4,688.44	11,174.18

Class II water was offered for sale only when the reservoirs were overflowing, or when there was a surplus in excess of the probable amount required to complete deliveries appurtenant to the included lands and to the nonrelinquished concessions. All other sales were limited to Class I and filtration waters.

MAINTENANCE.

On account of the rapid deterioration of the galvanized-iron flume sheets, and the decay of all wooden trestles, the cost of maintenance during the next two years will assume large proportions. From present indications, all the old flume sheets will need to be replaced, and a large amount of material will be required to repair and reconstruct the trestles.

Repairs to flumes were made as follows:

Patillas Canal.—Repairs to the Patillas Flume, which were begun March 21, 1918, were completed in July at a cost of \$8,451.95. Two spans of the flume, which were not rebuilt, were destroyed October 11 by a severe earthquake shock. These were repaired and the delivery of water was resumed October 30. On June 26, 1919, the 10 spans of this flume between the head wall and the first concrete trestle, representing a length of 164 feet, collapsed and fell to the ground. Upon examination of the wreck it was found that one of the concrete pedestals had been displaced. The heavy rains during the months of May and June had saturated the soil around and below the pedestal, and the failure was caused either by the settlement of the pedestal or by the earthquake shock which was felt in Patillas at about the same time. Repairs were started immediately and the delivery of water will be resumed shortly after the end of the fiscal year.

The flume sheets of the Arroyo Flume became so weakened by patches of rust, which in some cases had eaten through the sheet, that they burst open. Some of the broken sheets were replaced and others were patched and kept in service until the new shipment of galvanized-iron sheets arrived from the States. Repairs were commenced January 22, and were completed May 5. This work, which included the building of two concrete towers to support the long span, changing the flume sheets, and rebuilding a short portion at each end of the flume with reinforced concrete, cost \$9,510.04.

Rio Seco Flume was entirely rebuilt with reinforced concrete at a cost of \$1,782.65.

The long flume across the Corazón River will soon have to be repaired, as the metal sheets can not be kept in service much longer. All the material required is now available, and the reconstruction of the flume will be commenced when the present structure becomes unserviceable.

When repairs on the Felicita and Corazón flumes are completed, the cost of maintenance of the Patillas Canal will be greatly reduced, and unless some unforeseen accident occurs, all structures should give good service for several years.

Guamani canals.—There are 29 flumes on the Guamani canals, and some of the metal sheets have nearly reached the limit of usefulness. Some of the wooden trestles were built with lumber that had not been creosoted, and during the past two years many parts have been replaced. The cost of maintenance will increase until the flumes have been rebuilt.

Juana Diaz Canal.—In this canal there are 16 metal flumes of large section supported by timber structures, most of which are of creosoted lumber. From an inspection made during the fall of 1918, it was found that the decay of some of the timbers threatened the stability of the structures, and active measures were taken to replace all defective parts. Before this work could be completed, two spans of flume No. 6 collapsed. This was caused by the failure of one of the 8 by 8-inch posts, which to all

outward appearance was sound, but was found to be decayed inside. Repairs were promptly made, so that the delivery of water below this flume was interrupted for only six days. Special examination was then made of all the posts in all the trestles throughout the district, and all defective timbers were replaced. The oxidation of the metal sheets used in the Juana Diaz Canal flumes has not advanced as rapidly as in those of the eastern division. Some of them are leaking but can be kept in service for some time. Plans are being prepared for the reconstruction of flume No. 15, in which reinforced concrete will be used throughout, and when completed some of the old metal sheets can be used in making repairs to other flumes.

General repairs and betterments.—The routine work of cleaning the various canals of weeds, moss and deposits has been continuous throughout the year.

Several places in the main canals and in some of the laterals, where there was considerable seepage, and sections where the flow of water in the canal had eroded the banks, were repaired either with concrete lining and drops, or by paving the banks with rock.

In order to deliver water to the additional lands that had been included in the irrigation district, and to make deliveries to lands previously included at points more convenient for the water users, several new outlets and modules were constructed, the cost of many of these being paid by the water users. Several stilling boxes were installed at modules where there was considerable commotion in the water surface or where orifices had been submerged in order to secure more accurate measurements of gage heights.

The crest of the spillway of Patillas Dam was raised with concrete 1 foot, which increases the storage capacity of the reservoir 284 acre-feet.

The floods which occurred during the summer and fall of the year 1916 caused considerable damage to several important structures. Among these was the siphon under the Patillas Spillway Channel which was partially destroyed, the headworks on the upper bank being completely wrecked. Repairs were made and the delivery of water was resumed in the month of February of this year. During the time that the siphon was out of commission the delivery of water was made at other outlets.

Considerable difficulty has been encountered in the operation of the gates in Patillas Dam. In the month of October the breaking of a defective casting, which connected the gate stem to the main gate; caused the latter to drop to the bottom of the tunnel, thus cutting off the flow of water. The gate was raised and supported by screw jacks until a new casting was received from the manufacturers. In the meantime the delivery of water was regulated by the upper gate, which has also given more or less trouble when operating under the high head of a full reservoir. Necessary repairs will be made as soon as the defective parts can be replaced.

About one year ago when the stored water in Guayabal Reservoir became exhausted, it was discovered that the deposits of mud and debris in the bottom of the reservoir near the outlet gates was from 16 to 18 feet in the depth, and that the rack bars in front of the sluice gates were choked with leaves, moss, trees, and debris. Two of the racks in front of the gates had been crushed by the weight of the debris. Several efforts were made to clean out the accumulated deposits and to repair the rack bars, with only partial success. Much of the material was sluiced out through the gates, but before the work could be completed floods submerged the gates so that work was suspended. No difficulty has been experienced during the past year in the operation of the gates. It was anticipated that all repairs could be completed this year, but on account of heavy rains during the months of May and June the reservoir is nearly full, and further work at present stage of the water will be impossible.

NEW CONSTRUCTION.

Surveys were made for the additional right of way for the Patillas Reservoir and the new roads, which is required on account of the proposed reconstruction of the spillway of the Patillas Dam, which is to be raised 7.5 feet in height and which will increase the storage capacity of the reservoir about 2,200 acre-feet. On account of difficulties encountered in securing the necessary right of way, construction during the fiscal year was limited to building five road culverts and making extensions to eight others.

A pumping station was built about 1 mile below the Patillas Canal for the purpose of utilizing the filtration waters from the bed of the Corazon Brook, which amounts to about 1.5 second-feet. The complete installation cost \$1,242.96.

HYDROELECTRIC SYSTEM—CARITE WATER POWER.

Operation.—With the exception of short interruptions caused by necessity of cutting off the current from transmission lines while making new connections, a few cases of broken wires, and a few hours' delay for the purpose of repairing a slip joint in the pipe line, the delivery of power from the plant and substations has been continuous.

Considerable attention has been required by the exciters at the plant, caused by defective carbon brushes, worn out commutators, and, in part, by inexperienced help. As both exciters are in continuous operation, it was considered advisable to install a spare machine, which has been ordered and is expected to arrive next month. Trouble has also been experienced by the clogging up of the cooling coils of the transformers at the plant with deposits of a spongy vegetable matter carried by the water. The deposit accumulates rapidly and is very difficult to remove from the three-fourth inch coils, which are sometimes completely stopped up.

The past year has been very favorable for operation. The water supply has been ample and the daily load factor has averaged between 80 and 90 per cent. On June 30, 1919, the connected load amounted to 1,145 horsepower, consisting of 727.5 horsepower of flat-rate motors, 216.5 horsepower of meter-rate motors, and 201 horsepower of connected lighting load, equivalent to a total of 854.5 kilowatts. The peak load at the plant switchboard was 900 kilowatts, the minimum load 530 kilowatts, and the average load for the 24 hours of the day was 776.5 kilowatts, or a load factor of 86.3 per cent.

The contracts made during the year and the total to date are as follows:

	Base A, flat rate.		Base B, meter rate.		Base C, private lighting.		Municipal, lighting.	
	Num-ber.	Horse-power.	Num-ber.	Horse-power.	Num-ber.	Horse-power.	Num-ber.	Horse-power.
June 30, 1918.....	33	737.0	24	333.5	9	12.0	4	215.0
During year.....	3	150.5	16	379.5	3	14.0	2	30.0
June 30, 1919.....	36	887.5	40	713.0	12	26.0	6	245.0

Total to date, 93 contracts aggregating 1,866 horsepower.

The total output for the year was 4,830,190 kilowatt-hours as compared with 3,290,315 kilowatt-hours for the previous fiscal year, an increase of 47 per cent. The total income for the year from the sale of power was \$97,661.92, an average of 2.022 cents per kilowatt-hour generated. When power is delivered to all contracts, the annual income will be approximately \$144,000.

The amount of power generated, the amount delivered to substations, and the monthly income from the sale of power are shown in Table No. 5.

Maintenance.—In order to make repairs to the galvanized-iron flume in the canal leading to the penstock, which had been in continuous service for four years, without shutting down the power plant, it was necessary to build a new flume alongside the old one. Both flumes will be required when the plant is working to its full capacity. The canal and forebay were cleaned out and minor repairs made to the pipe line. Considerable maintenance work was required on the road, owing to heavy rains, and one wooden bridge was rebuilt.

It was necessary to change a few poles on the transmission lines and repair some broken wires, but the total maintenance expenses were small.

Construction.—During the year, 3.4 miles of 4,000-volt transmission line were completed, making a total to date of 100.4 miles of transmission lines, consisting of 27 miles of main 20,000-volt line, 35.8 miles of main 4,000-volt line, and 37.6 miles of 4,000-volt branch lines. In addition to the above, a large amount of work has been done on lines which are only partially completed, owing to delays experienced in receiving electrical equipment from the United States.

Part of the equipment for the 225-kilowatt outdoor substation to be built near Salinas was received in March and the tower placed in position. The transformers arrived in June and it is expected to have this station operating early in August.

A large number of distribution transformers, lightning arresters, and meters have been installed for the new pumping installations connected during the year. A concrete foundation was built for a spare exciter at the power plant.

Proposed extension.—During the coming fiscal year it is proposed to begin work on a second hydroelectric development below the present plant, utilizing the same water a second time. About 1,000 horsepower can be developed by the proposed installation. This plant can act as an auxiliary for the Carite plant, and if arrangements can be made to secure breakdown service from private plants the output of the proposed installation can be sold in the irrigation district, where the demand for power exceeds the capacity of the present development.

Both the Guayama and Santa Isabel substations are now loaded to their full capacity, which is only 825 kw. The contracts signed to date aggregate 1,866 horsepower, and when all are connected it will take the full capacity of the present 1,400 K. V. A. plant to furnish the required load.

It is proposed to extend the 20,000-volt line to a point near Potola, where an outdoor substation will be built. The capacity of the substation at Guayama should be doubled, and this can best be done by installing the three 75-kw. transformers now at Salinas, in the Guayama station, and procuring three 150-kw. transformers for Salinas, where the prospective load is already greater than the capacity of the present transformers. When these improvements are made the system will have four substations with a combined capacity of 1,950 kw., which will probably answer all future requirements.

LEGAL DIVISION.

During the year titles have been perfected and contracts executed for the purchase of land necessary for the irrigation service, comprising an area of 17,108 acres, representing in value the sum of \$1,392.86. Deeds made by the right-of-way attorney and examined and approved by the department of justice of Porto Rico, ready for the signature of the parties interested, comprises an area of 12,438 acres, representing in value the sum of \$205. Condemnation suits for parcels of land required for the irrigation service instituted before the district courts of Ponce and Guayama and pending trial comprise an area of 31,397 acres, representing in value deposited with the secretaries of said district courts the sum of \$1,290.27.

The right-of-way attorney in charge of the legal division of the irrigation service has his office in San Juan. In addition to the work of perfecting titles, preparation and execution of deeds, and condemnation proceedings in connection with the work of the irrigation service, he has the work of perfecting titles, preparing and executing deeds, and condemnation proceedings in relation with the acquisition of land for the different insular roads under construction by the department of the interior, and also the execution of deeds and sales of public lands belonging to The People of Porto Rico.

MAIN OFFICE.

During the fiscal year the division of property and accounts handled 496 debit vouchers, amounting to \$517,957.76; 1,031 credit vouchers, amounting to \$112,177.69; and 310 journal vouchers, amounting to \$2,174,031.02; also 97 requisitions and 55 service orders.

The chief clerk, as paymaster, disbursed on laborers' pay rolls and minor accounts \$57,412.11.

During the year the sales of equipment no longer needed by this service amounted to \$507.02. The total sales since construction was completed amount to \$35,277.78.

The total expenditures to date for construction amount to \$4,206,952.82. The total cost of operation and maintenance of the irrigation system and the hydroelectric system to June 30, 1919, exclusive of principal and interest and of the cost of the development and extension of the hydroelectric system, was \$506,563.72, of which \$122,966.09 was expended during the fiscal year. The principal and interest paid on outstanding bonds during the fiscal year amounted to \$150,000 and \$197,340, respectively.

Of the \$200,000 of bonds authorized by act No. 23, approved November 22, 1917, for the purpose of providing funds for raising the spillway at Patillas Dam and extending the hydroelectric system, subscriptions have been received from the planters of the irrigation district for bonds to the amount of \$173,000, for which bonds to the amount of \$117,000 have already been delivered. The total amount of irrigation bonds outstanding as of June 30, 1919, was \$4,917,000.

A statement of net charges to features, general balance sheet, and financial statement are given in Exhibits Nos. 38, 39, and 40 of the consolidated financial exhibits.

TABLE No. 1.—Rainfall, by months, for the fiscal year ending June 30, 1919, and the monthly normals for the period covered by the irrigation service records; also totals for the fiscal year ending June 30, 1918.

[Rainfall in inches.]

Month.	Patillas.		Guayama.		Carite.		Jajome.		Guayabal.		Toro-Negro.	
	Month.	Normal.	Month.	Normal.	Month.	Normal.	Month.	Normal.	Month.	Normal.	Month.	Normal.
1918.												
July.....	5.18	6.37	5.87	4.90	8.86	8.80	7.17	10.34	0.60	3.23	7.61	7.92
August.....	2.90	6.29	2.24	4.61	4.23	7.06	2.69	7.61	2.18	5.75	4.57	7.45
September.....	11.06	6.62	9.45	6.62	13.06	8.25	10.66	7.34	9.29	6.80	12.47	12.46
October.....	9.89	9.90	9.81	8.58	14.66	11.50	10.04	8.86	8.24	11.48	11.50	16.93
November.....	4.39	7.60	5.93	6.44	9.44	8.80	10.04	8.47	16.09	6.57	6.66	10.13
December.....	3.33	3.78	5.43	2.78	4.41	4.67	4.28	3.85	.91	1.93	4.96	5.06
1919.												
January.....	4.49	3.60	3.97	2.87	6.97	4.80	7.26	4.06	2.77	1.45	7.17	3.62
February.....	.48	2.52	.11	1.71	.95	4.14	.97	3.28	.04	2.26	.85	3.50
March.....	.56	2.55	.21	1.69	1.64	4.65	2.56	3.62	1.09	2.19	1.57	3.70
April.....	5.89	3.03	5.95	2.52	12.04	5.12	13.11	6.01	9.65	4.51	15.24	10.09
May.....	5.80	4.29	4.49	3.98	5.71	5.88	3.95	5.30	3.62	4.40	6.24	8.17
June.....	9.30	7.10	9.10	6.01	7.83	8.06	7.12	8.70	9.06	4.19	12.35	7.05
Total 1918-19.	63.29	64.01	62.56	52.30	89.52	81.52	79.85	77.43	63.42	51.76	91.19	96.08
Total 1917-18.	50.62	63.87	37.67	50.98	59.09	80.38	59.89	63.17	49.02	53.65	85.01	96.91

The number of years record on which the normals are based is shown as follows:

	Years.
Patillas, May 1, 1911, to June 30, 1919.....	9
Guayama, Dec. 1, 1910, to June 30, 1919.....	9
Carite, June 1, 1911, to June 30, 1919.....	9
Jajome, Aug. 1, 1913, to June 30, 1919.....	9
Guayabal, June 1, 1911, to June 30, 1919.....	9
Toro-Negro, June 1, 1911, to June 30, 1919.....	9

TABLE No. 2—Run-off in acre-feet of the streams entering reservoirs.**A. PATILLAS RESERVOIR.**

Fiscal year.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Year.
1907-8.....				4,245	2,350	3,765	3,690	5,511	4,612	2,129	3,533	4,240	34,075
1908-9.....	6,707	7,472	15,555	12,216	4,687	4,804	10,222	4,640	2,455	1,810	14,330	11,179	96,077
1909-10.....	7,329	22,186	12,384	11,778	21,215	3,230	2,478	1,732	3,105	1,477	2,064	2,862	91,840
1910-11.....	3,044	9,212	11,276	6,986	3,447	3,524	2,096	5,082	1,426	1,720	9,460	6,169	63,942
1911-12.....	5,425	5,398	6,466	8,020	6,743	10,200	7,467	3,708	5,079	3,833	2,472	5,414	70,225
1912-13.....	2,739	2,646	4,386	21,307	14,555	4,196	6,084	3,901	8,484	5,335	7,047	9,601	91,084
1913-14.....	9,507	7,022	9,189	6,925	6,251	2,607	2,093	6,958	2,700	3,475	8,487	8,249	73,463
1914-15.....	5,066	4,968	4,097	2,812	12,331	5,057	4,796	3,003	2,027	2,344	1,539	12,582	61,222
1915-16.....	8,034	4,931	5,488	3,666	2,331	3,669	1,681	1,192	992	889	1,813	4,006	38,701
1916-17.....	13,470	14,608	8,453	21,213	28,883	3,655	1,707	1,012	863	889	2,013	3,835	100,631
1917-18.....	5,459	5,709	6,374	4,095	3,521	4,620	1,755	1,610	1,099	1,119	1,874	6,395	43,630
1918-19.....	5,228	1,996	9,095	14,741	13,249	3,786	4,431	1,393	848	2,981	4,360	11,980	74,088
Total.....	72,008	86,348	92,763	117,984	119,563	53,143	49,705	40,295	33,660	28,010	58,992	86,512	838,978
Average.....	6,546	7,850	8,433	9,832	9,964	4,429	4,142	3,358	2,808	2,334	4,916	7,209	69,915

B. CARITE RESERVOIR.

Fiscal year.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Year.
1907-8.....				1,730	937	1,399	1,888	2,390	1,801	910	1,302	1,359	13,716
1908-9.....	2,080	1,967	4,196	3,014	1,202	1,676	1,437	2,373	1,121	1,227	9,739	4,202	34,234
1909-10.....	2,626	13,430	4,184	3,853	4,523	1,268	1,214	918	1,239	600	539	1,007	35,401
1910-11.....	955	3,660	7,489	2,401	1,368	1,989	1,190	2,481	683	1,257	6,014	2,966	32,453
1911-12.....	2,089	1,855	2,105	3,845	1,811	4,738	2,271	1,133	1,179	991	865	1,136	24,018
1912-13.....	950	989	1,255	6,610	4,008	1,301	2,176	1,806	2,669	1,452	2,630	2,073	27,949
1913-14.....	3,114	2,476	4,017	2,281	2,032	1,135	1,057	2,435	2,011	1,762	2,982	3,024	28,356
1914-15.....	1,782	1,482	1,066	830	2,488	1,203	1,398	1,004	671	1,002	603	4,021	17,550
1915-16.....	1,727	1,417	1,715	1,064	952	1,179	816	618	494	387	478	1,190	12,037
1916-17.....	5,377	4,763	2,762	7,195	11,186	1,706	755	498	494	686	610	1,303	37,335
1917-18.....	1,770	1,477	1,932	1,074	936	1,513	596	594	536	327	486	1,328	12,569
1918-19.....	1,637	654	2,875	3,427	3,526	1,236	1,926	545	635	1,369	1,484	2,729	22,043
Total.....	24,107	34,170	33,626	37,353	34,969	20,313	16,724	16,795	13,533	11,970	27,732	26,338	297,861
Average.....	2,191	3,106	3,057	3,113	2,914	1,695	1,394	1,400	1,128	998	2,311	2,195	24,805

TABLE NO. 2.—Run-off in acre-feet of the streams entering reservoirs—Continued.

C. COAMO RESERVOIR.

Fiscal year.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Year.
1907-8.....					1,222	1,131	534	664	965	463	1,510	800	7,349
1908-9.....	631	590	890	1,404	837	679	664	414	400	2,838	18,898	720	29,025
1909-10.....	538	16,751	9,370	6,431	34,774	4,311	2,545	1,081	1,610	1,042	626	542	79,621
1910-11.....	408	5,424	7,522	2,026	2,783	4,788	1,393	1,031	730	848	2,158	883	29,994
1911-12.....	522	358	426	9,143	4,269	11,335	3,033	1,643	1,025	1,522	545	393	31,214
1912-13.....	411	387	2,284	21,949	31,175	6,090	2,613	1,570	1,206	1,024	1,461	586	70,786
1913-14.....	534	404	1,436	3,223	892	581	375	654	2,421	1,691	2,943	2,038	17,192
1914-15.....	802	552	501	1,954	6,064	1,620	756	574	485	497	346	448	14,602
1915-16.....	352	653	1,550	1,213	52	260	293	308	371	348	819	1,571	7,896
1916-17.....	1,892	10,263	7,394	24,952	11,133	3,171	2,327	804	591	925	941	1,194	65,877
1917-18.....	616	655	808	573	1,399	743	294	309	278	580	596	578	7,439
1918-19.....	314	340	2,632	916	1,639	532	733	369	584	1,719	—7	289	10,080
Total.....	7,020	36,377	34,816	73,784	96,135	35,241	15,560	9,421	10,726	13,497	30,836	10,102	366,165
Average.....	638	3,307	3,165	6,708	8,011	2,937	1,297	785	894	1,125	2,570	842	33,298

D. GUAYABAL RESERVOIR.

1908-9.....				9,216	5,809	3,537	2,378	2,316	1,878	3,599	8,139	2,990	39,892
1909-10.....	2,226	19,584	12,623	11,997	36,288	5,924	3,783	1,613	4,038	6,480	3,284	1,682	109,531
1910-11.....	2,787	8,868	11,158	10,558	10,913	6,961	2,910	3,331	2,101	2,770	7,087	2,961	72,435
1911-12.....	2,741	2,310	3,640	31,299	11,722	15,012	3,388	2,090	3,444	3,975	2,004	1,453	83,108
1912-13.....	2,886	1,576	9,286	45,496	39,190	5,734	2,997	1,918	1,755	3,285	5,330	2,130	126,583
1913-14.....	1,482	1,304	3,988	8,799	3,643	1,679	1,212	1,870	3,402	3,220	6,154	5,599	42,712
1914-15.....	2,399	1,734	2,190	12,206	21,672	7,387	2,806	4,405	2,102	2,315	1,760	4,219	65,255
1915-16.....	1,640	7,081	11,169	19,001	4,592	2,517	1,411	1,900	1,100	2,551	6,650	8,944	68,556
1916-17.....	18,574	14,672	13,138	36,831	11,225	3,318	1,849	1,270	882	5,035	3,219	5,331	115,347
1917-18.....	1,887	2,076	6,031	10,869	6,923	4,548	2,027	1,941	802	2,558	5,406	1,883	46,951
1918-19.....	2,773	1,889	7,859	10,261	67,857	3,438	2,181	791	1,091	3,980	2,740	6,193	111,035
Total.....	39,394	64,094	81,082	206,623	219,864	60,055	26,942	23,445	22,655	39,778	52,073	43,418	841,533
Average.....	3,939	6,609	8,108	18,784	19,988	5,460	2,449	2,131	2,069	3,616	4,734	3,947	76,503

TABLE NO. III.—Acreage selected by the irrigation commission for inclusion in the permanent irrigation district; also the additional acreage that has been included by order of the court, the date the water was delivered or was offered for delivery, and the area to which water has not yet been offered.

	Patillas.	East Guan.	West Guan.	Eastern Division.	Juana-Dias Canal.	Total in district.
Total acreage selected by the commission	11,966.10	412.10	3,036.20	16,314.40	10,438.10	26,752.50
Total acreage to which water was not offered July 1, 1917.....	93.00	6.00	1.00	100.00	80.80	180.80
Total acreage to which water was offered July 1, 1917.....	11,873.10	406.10	3,035.20	16,214.40	10,357.30	26,571.70
L. L. No. 379-B, 379-C, and 379-G, and L. L. No. 81, water offered as of July 1, 1917.....			42.00	42.00	32.40	74.40
Total area to which water was offered as of July 1, 1917.....	11,873.10	406.10	3,077.20	16,256.40	10,389.70	26,646.10
L. L. No. 266, water offered Aug. 1, 1917.....					9.60	9.60
Total area to which water was offered Aug. 1, 1917.....	11,873.10	406.10	3,077.20	16,256.40	10,399.30	26,655.70
L. L. No. 266, water offered Oct. 1, 1917.....					7.60	7.60
Total area to which water was offered Oct. 1, 1917.....	11,873.10	406.10	3,077.20	16,256.40	10,406.90	26,663.30
L. L. No. 24-B, water offered Nov. 1, 1917.....	5.00			5.00		5.00
Total area to which water was offered Nov. 1, 1917.....	11,878.10	406.10	3,077.20	16,261.40	10,406.90	26,668.30
Included Jan. 1, 1919, L. L. Nos. 3 and 42.....	128.00			128.00		128.00
Total area (minus 69 acres) to which water was offered Jan. 1, 1919.....	12,006.10	406.10	3,077.20	16,389.40	10,406.90	26,786.30
Inclusion of L. L. No. 3 appealed.....	69.00			69.00		69.00
Area to which water was offered Jan. 1, 1919.....	11,937.10	406.10	3,077.20	16,320.40	10,406.90	26,727.30
Water offered to L. L. Nos. 85-A, 327-A and 319.....	12.00			12.00	8.40	20.40
L. L. Nos. 371 and 374 included and water offered Jan. 1, 1919.....					116.00	116.00
Total area to which water was offered Jan. 1, 1919.....	11,949.10	406.10	3,077.20	16,332.40	10,523.30	26,863.70
L. L. Nos. 3, 58, and 79, water not offered.....	69.00	6.00	1.00	76.00		76.00
Total area included to July 1, 1919.....	12,018.10	412.10	3,078.20	16,408.40	10,531.30	26,936.70

TABLE No. IV.—*Actual amount of water delivered each month, and the amount offered but not used.*

Year.		Actually delivered.	Offered but not accepted.
EASTERN DIVISION.			
1918:			
July.....	5,055.03	27.37	
August.....	5,380.56	22.96	
September.....	4,502.76	2,075.40	
October.....	3,946.94	393.59	
November.....	3,849.58	3,203.94	
December.....	6,194.65	21.08	
1919:			
January.....	5,724.37	496.80	
February.....	6,393.45	66.92	
March.....	6,244.83	36.16	
April.....	6,061.51	706.38	
May.....	4,112.95	2,563.89	
June.....	5,608.61	1,173.42	
Total, Eastern Division.....	63,055.24	10,797.91	
WESTERN DIVISION.			
1918:			
July.....	2,894.83	.....
August.....	2,549.00	.....
September.....	5,379.62	1,080.54	
October.....	7,287.51	378.20	
November.....	4,266.67	3,976.72	
December.....	6,862.16	124.96	
1919:			
January.....	6,076.17	437.66	
February.....	5,666.94	51.81	
March.....	5,385.90	2.76	
April.....	4,234.26	990.29	
May.....	4,633.94	913.45	
June.....	4,027.64	50.08	
Total, Western Division.....	50,244.64	8,006.47	
Total, Eastern and Western Divisions.....	122,299.88	18,804.38	

TABLE No. V.—*The generation, delivery, and sale of power from the Carite Water Plant.*

Month.	Power generated, kilowatt hours.	Power delivered at substations.	Income from sales of power.
1918:			
July.....	342,140	319,014	\$7,072.94
August.....	361,960	328,526	7,295.76
September.....	317,825	286,086	7,119.70
October.....	358,990	323,145	7,903.96
November.....	239,385	212,830	7,777.66
December.....	436,750	388,630	8,274.49
1919:			
January.....	477,720	431,560	8,337.84
February.....	471,525	421,871	8,676.49
March.....	497,115	437,958	8,874.14
April.....	428,830	388,114	8,681.05
May.....	434,675	397,242	8,510.29
June.....	463,285	422,975	9,137.80
Total.....	4,830,190	4,357,951	97,661.92

TECHNICAL INVESTIGATIONS AND REPORTS ON RATES, FRANCHISES, ETC.

The commissioner of the interior, by virtue of his office, is a member of the public service commission, and at present is chairman of the committee on rates and member of the committee on franchises. As applications for franchises, the question of rates, and many other matters submitted to the commission usually require investigations and reports of a technical nature, and as the commission has no technical personnel, such matters have been referred to the commissioner of the interior, who, through the engineering force of the department, investigates and reports upon their physical, engineering and economic features.

During the past fiscal year the engineers of this department have made investigations and reports on the following matters which were referred to the commissioner of the interior by the public service commission:

Reports on applications for increase in rates:

Rio Piedras & Caguas Railway.
American Railroad Co.
Ponce Light and Power Co.
Mayaguez Light and Ice Co.
Yauco Electric Co.
Ponce Municipal Dock.
Municipality of Arecibo, light and power rate.
Línea Férrea del Oeste.
Porto Rico Telephone Co.
Gabino Balasquide (request for approval of rates).

Reports on franchises—Railroads:

American Railroad Co., Carolina to Ponce around eastern end of island.
Antonio Roló, Las Piedras to Naguabo via Humacao Playa.
Central Juncos, Las Piedras to Caguas.

Tramways:

L. Ninillat-Mayaguez.
Aerial transportation service, Charles Emilio Pelletier.

Electric plants:

Cayey Light and Ice Co.

J. B. Filardi, Yauco.
Gabino Balasquides, Peñuelas.
Aibonito Electric Co.
J. A. Caparrós, Maricao.
R. Gandía Córdova, Coamo.
Vicente Martínez Reventós, Cialitos.

Water concessions:

Vicente Quilichini, irrigation Sábana Grande.
Central San Cristóbal, cancellation of franchise.
Ramón Sellés & Casals, Industrial San Lorenzo.
Francisco Matanzo, irrigation Rio Piedras.
Primo Salgado, Industrial, Adjuntas.
Juan and Onofre Torres, Industrial, Yauco.

Water works:

R. Valcourt Questall, Aguas Buenas.

Miscellaneous reports:

Electrification of Rio Piedras-Caguas Railroad.
Railroad Station at Trujillo Alto.
Condition of brakes on the passenger cars of Porto Rico Railway Light & Power Co.
Condition of brakes on the passenger cars of American Railroad Co.

DIVISION OF DISBURSEMENTS AND ACCOUNTS.

BRIEF HISTORICAL REVIEW.

Under the Spanish régime.—The system of accounting established during the time of the Spanish régime in the various branches of the government which have subsequently come under the department of the interior differed in many respects from the one used at present. In October, 1883, a "Negociado de Contabilidad" (bureau of accounts) was organized, and the duties which were assigned to it comprised the dispatch of the following matters related to public works:

1. The issuing of warrants for payments of bills corresponding to requisitions made by the chiefs of divisions.
2. The auditing of estimates for payment of work done by contract, and of all other accounts in connection with such work.
3. The auditing of all bills for expenses incurred in work done by administration.
4. Preparation of all papers in connection with the funds of the various branches of public works.
5. Preparation of all papers required to effect transfers of appropriations, as well as all papers relative to special and supplementary appropriations.
6. Monthly distribution of all funds at the disposal of public works.

This division examined and made report on the final liquidations of all work done by contract and by administration; on the bills of professional fees of the engineers and architects employed by the government; on the papers relative to condemnation of land; and in general on all matters which, by their nature, were considered as having a bearing on public finance and accounting.

The books kept by the division were the journal, a book of current accounts of the budget, books for special accounts, and auxiliary books.

The documents accepted as vouchers for the entries in these books were the following.

1. Original bills which were prepared by the bureau itself and duly approved.
2. The monthly statements which the "Ordenanza de Pagos" forwarded of all payments made without the intervention of the bureau of accounts.
3. The certified copies of approved final liquidations, of papers for condemnation of lands, interests on delayed payments, bills for professional fees of engineers and architects of the department, and of all expenditures approved by the head of the department.

In connection with that kind of work or services extending over a period of two years or longer, in other words, work done under no fiscal year appropriation, a general account was kept by the bureau of all liabilities and of the distribution of funds made each fiscal year for all work contracted for or under execution.

The bureau examined and scrutinized all bills for services obtained by administration, as well as the estimates of work done by contract, and other vouchers for payment. This scrutinizing examination had for its purpose not only the checking up of computations and examining the receipts and all papers attached supporting the bill, but also the looking into the question as to whether the expense was a justified one.

Once the accounts were thus examined they were sent to the chief engineer of public works for his approval, and were subsequently forwarded to the disbursing officer for payment. This officer obtained the necessary funds for such payments by making requests for advance from the various appropriations through the chief engineer of pub-

lic works to the secretary of finance. Once these requests were approved the secretary of finance would then give instructions to the general treasurer to turn over the amount requested. At the end of each month a detailed statement with supporting vouchers of all payments made were submitted by the disbursing officer through those higher in authority to the "Tribunal de Cuentas del Reino" in Madrid for examination and final approval.

Under the American Government.—From May 1, 1900, to June 30, 1905, payments were made by three official paymasters, two of them working for public works and one for the bureau of insular telegraph. The bills, once they were prepared and certified to, were passed over to the disbursing officer, who authorized their payment and who would, in turn, send monthly statements to the auditor of Porto Rico showing the payments made and all warrants. This officer requested every month from the auditor advances of money from the various appropriations.

The disbursing officer availed himself of the field overseers to pay off the laborers at regular intervals, and for this purpose he sent to the overseers the amounts of the pay rolls previously forwarded to this office. Every now and then, however, payments were made directly by the paymasters of the division.

In the following statements are given the number of vouchers and pay rolls handled by this division, their amounts, the number of employees, and their annual salary, during the fiscal years from 1900 to 1919.

Year.	Number of employees.	Amounts paid in vouchers and pay rolls.	Total salaries of employees.	Year.	Number of employees.	Amounts paid in vouchers and pay rolls.	Total salaries of employees.
1900-1.....	12	\$483,510.41	\$10,800.00	1910-11.....	14	\$1,060,228.03	\$14,490.00
1901-2.....	12	589,200.00	10,800.00	1911-12.....	11	1,892,439.85	14,220.00
1902-3.....	15	882,373.55	14,490.00	1912-13.....	12	1,790,142.39	14,420.00
1903-4.....	14	644,235.40	13,688.00	1913-14.....	10	1,132,629.48	12,020.00
1904-5.....	7	345,700.00	10,130.00	1914-15.....	11	723,802.60	12,420.00
1905-6.....	6	411,587.01	6,490.00	1915-16.....	11	703,960.43	12,120.00
1906-7.....	8	366,881.38	8,360.00	1916-17.....	11	999,665.19	13,240.00
1907-8.....	10	1,399,327.36	10,220.00	1917-18.....	14	1,397,007.08	17,700.00
1908-9.....	12	1,818,776.59	14,490.00	1918-19.....	17	1,585,628.80	21,380.00
1909-10.....	14	999,363.07	14,490.00				

FISCAL YEAR 1918-1919.

This division, an important branch of the department, renders valuable contribution to the success of the administration.

A complete and clear accounting of all appropriations assigned to the department of the interior by the legislative assembly is kept by this division in accord with the books of the auditor of Porto Rico.

The innumerable bills received from all parts of the island for various items, such as purchase, without the intervention of the bureau of supplies, printing, and transportation, of native products; special services in emergency cases, rent of private houses used for officers; light and water for government buildings, besides the bills from the bureau of supplies, printing, and transportation for purchase, through them, of constructing materials of all kinds, office supplies and furniture, food for prisoners, are all received at this division, where once examined, classified, and vouchered and after charging their amounts to the various appropriations from which they are to be paid and finally approved by the commissioner of the interior are submitted to the auditor of Porto Rico for payment.

Account is also kept of all contracts entered into by the commissioner of the interior in behalf of the The People of Porto Rico and partial payments on same are made through this division.

The work done by this department for municipalities and school boards is subject to a system of accounting intrusted to this bureau. The architect of the department and the engineer in charge of municipal works furnish the data related to such work and this division renders accounts to the debtor concerns and places to their credit the reimbursements made to the treasury through the auditor of Porto Rico.

The large quantity of government property in this department, valued at \$270,000, is kept subject to the regulations of the auditor of Porto Rico on this matter. There is a property clerk in this division who is directly responsible to the auditor for all government property in the department of the interior. The delivery of unexpended property to the employees of the department, the condemnation of same when it becomes unserviceable, the transfer of same, the sale when so ordered, in a word, all matters related to government property in this department, are handled by this division. The furnishing of office supplies to all the offices of the department in San Juan to overseers, foremen, survey parties operating in the field is done by this bureau.

The personnel of the department under the classified civil service, and also all temporary employees, are subject to the provisions of the civil-service law in force, and to this purpose a register of employees is kept with the individual record showing each person since his entering government service until his separation. The appointment of employees, promotions, transfers, separations from the service, granting of leaves, etc., all requirements of the law and of the civil service commission are looked after by this division.

The chief of this division is also the special disbursing officer of the department under bond of \$75,000, paid by the People of Porto Rico, and has charge of the payment of wages to laborers working on the various roads of the island. The pay system of this division is a good one and has given satisfactory results. With the exception of laborers working in or near San Juan who receive their wages every week, all others on the island are paid twice a month, two paymasters doing the trip around the island in four days, where an average of 2,000 men among free laborers and prisoners receive approximately from \$10,000 to \$12,000. The efficiency of the system is shown by the fact that only 0.2 per cent of all the laborers had not collected their wages at the close of the fiscal year on June 30 last, and even this is accounted for by the fact that a great majority of them were prisoners who had been set free prior to the paymaster's arrival at the camps or the road where they worked, and small amounts of 10, 15, and 25 cents remained unclaimed by interested parties.

The commissioner of the interior, who is also the secretary-treasurer of the board of trustees of the Carnegie Library, has under his control the appropriations of this institution and it is this division which keeps accounts of same. The requisitions for materials, books, the bills for various items, salary pay rolls of the library employees, and all matters related to accounts controlled by the secretary-treasurer are looked after by this division.

Below are expressed in figures the activities of this bureau.

During the fiscal year ending June 30 ultimo there were prepared and passed for payment vouchers pertaining to 119 main accounts, with 53 subsidiary accounts, as follows:

Class.	Vouchers	Amount.
On account of contracts.....	294	\$581,084.37
Office salaries and expenses for materials and supplies and services pertaining to work executed by administration.....	5,557	686,990.92
Total.....	5,851	1,268,084.29

The special disbursing officer of this department made during this year 48,964 cash payments on 4,082 pay rolls amounting to \$317,544.51, payable as below indicated:

Maintenance and repair of public roads and bridges.....	\$232,151.61
Construction and survey of insular roads.....	20,161.16
Reconstruction and repair of public buildings.....	56,485.31
Reconstruction and repair of insular telegraph lines.....	3,478.57
Miscellaneous.....	5,267.99
Total.....	\$317,544.51

RÉSUMÉ.

Disbursed by vouchers.....	\$1,268,084.29
Disbursed by laborers' pay rolls.....	317,544.51
Total.....	1,585,628.80

The requisitions for materials issued on the bureau of supplies, printing, and transportation numbered 1,998 and the direct purchase orders issued to various parties reached 994, making a total of 2,992 requisitions.

Below is comparative statement of expenditures of the previous fiscal year and those of the present. The increase shown is due to greater appropriations for maintenance of roads and buildings and also to new road constructions:

Fiscal year.	Voucher.	Amount.	Laborers' pay rolls.	Amount.	Total.
1917-18.....	5,892	\$1,161,041.04	4,627	\$253,666.04	\$1,414,707.08
1918-19.....	5,851	1,268,084.29	4,082	317,544.51	1,585,628.80
Exceeding previous year.....		107,043.25		63,878.47	170,921.72

AUTOMOBILE OFFICE.

DEVELOPMENT OF MOTOR VEHICLES IN PORTO RICO FROM 1906 TO 1919.

Not until 1906 were records of automobiles kept in this department. Apparently up to that time their number was so small and the income to the treasury so insignificant that the matter did not deserve special attention; however, a resolution was passed by the legislative assembly this year to provide licenses for the automobiles on the island of Porto Rico. This law became effective April 1, 1906, and provided that automobiles operating on the roads of Porto Rico should pay \$17 per annum and display in a conspicuous place a numbered plate furnished by the department of the interior. The total collection from this source should go into the fund for "maintenance and repair of the insular roads of Porto Rico."

On March 14, 1907, the legislative assembly of Porto Rico passed a resolution to tax motor vehicles operating on the public roads as follows: Private cars, \$5 per annum; public carriers, \$10; heavy motor vehicles, \$100 per annum, regardless of their tonnage.

On March 10, 1910, an act was passed by the legislative assembly of Porto Rico providing that no person should be allowed to drive motor vehicles on the highways of Porto Rico without a license issued by the commissioner of the interior. These licenses became revocable at the discretion of the commissioner.

In the fiscal year 1915-16 the legislative assembly of Porto Rico passed the present automobile law, and the methods of collecting motor vehicle fees was somewhat changed. In former years the fees were paid in cash, which was deposited to the credit of the treasurer of Porto Rico. The new law provides that fees must be paid in internal-revenue stamps, which should be canceled upon the issuance of licenses. Fees are levied on private cars according to their horsepower, and public carriers pay, besides, the amount of \$30 to operate as such. Commercial vehicles pay in proportion to their tonnage. The law classifies motor vehicles and provides for special plates for each kind.

A statement is attached showing the increase in use of motor vehicles from the year 1906 to 1919 and the increase of the government's income from this source.

Explanatory and comparative statement of motor vehicles operating in Porto Rico from 1906 to 1919.

Year.	Automobiles.				Trucks.			
	Public.	Private.	Total.	Annual increase.	Public.	Private.	Total.	Annual increase.
1906-7.....		99	99					
1907-8.....		157		58				
1908-9.....		213	213	56				
1909-10.....		309	309	96				
1910-11.....		532	532	223				
1911-12.....	23	783	806	274		65	65	
1912-13.....	43	917	960	154		67	67	2
1913-14.....	58	1,006	1,064	104		61	61	
1914-15.....	189	1,344	1,533	469		80	80	19
1915-16.....	703	1,468	2,171	638		195	195	115
1916-17.....	803	2,367	3,170	999	68	89	157	48
1917-18.....	902	3,422	4,324	1,154	125	80	205	
1918-19.....	1,068	3,181	4,249		249	271	520	315

Year.	Number of vehicles.		Motor cycles.		Collections.	Increase in annual collections.
	Number.	Increase.	Number.	Annual increase.		
1906-7.....	99				\$495.00	
1907-8.....	157	58	31		847.00	\$352.00
1908-9.....	213	56	41	10	1,147.00	300.00
1909-10.....	309	96	37		1,619.00	472.00
1910-11.....	532	223	53	15	2,764.00	1,145.00
1911-12.....	871	339	91	39	10,827.00	8,063.00
1912-13.....	1,027	156	132	41	11,319.00	492.00
1913-14.....	1,125	98	187	55	11,949.00	630.00
1914-15.....	1,613	488	182		16,974.00	5,025.00
1915-16.....	2,366	753	211	29	47,755.24	30,781.24
1916-17.....	3,327	961	215	4	68,088.07	20,282.83
1917-18.....	4,539	1,202	210		89,696.43	21,631.36
1918-19.....	4,769	240	204		106,426.04	16,766.61

¹ The automobile law passed by the legislative assembly was put in force on April 13, 1916.

² Total collection of motor-vehicle fees.

FISCAL YEAR 1918-19—OPERATION OF THIS OFFICE.

This office has under its jurisdiction all work in regard to motor vehicles and the licenses of chauffeurs and operators; it is a branch of the bureau of disbursement and accounts of this department, but has worked within its own proper sphere since the year 1917, the intervention of the chief of said division being limited to the inspection of collections of internal-revenue stamps paid for all licenses issued for the public use of automobiles and trucks, to the transfers made of such vehicles in accordance with the automobile law in force, and to signing with the consent of the commissioner, licenses for chauffeurs, operators, and vehicles.

The business of this office is in charge of a chief automobile clerk, under whose supervision there is an assistant and a stenographer. This personnel is assisted in the months of June and July by 10 temporary employees during the days of which it is necessary to change all the number plates of motor vehicles, issue new licenses, and collect in internal-revenue stamps the fees for each. It will be understood that during those days there is a great deal of work, since according to the law in force no motor vehicle may be driven upon the roads of Porto Rico after the 1st day of July of each year, without renewing the license and being provided with new number plates, and this work must be done in connection with 4,973 licenses, and double this number of plates.

This office makes a careful investigation of all accidents caused by motor vehicles that are reported by the police and by the foreman and road menders at the service of public works in the roads of the island.

In all the cases in which the negligence of the operators or chauffeurs is shown, their licenses are withdrawn, definitely revoking or suspending them for a period of several days, in accordance with the importance of the case and the previous history of the chauffeur. Violation of road laws and municipal ordinances by the chauffeurs or operators, generally punished by the courts of justice, have also been causes for the suspension of licenses. All these cases of suspensions are always reviewed by the commissioner, and in his absences by the assistant commissioner, and when these suspensions are approved, notice is then given to the chauffeur through the police who are in charge of collecting badges and licenses.

The system used in this office and the care with which files are kept makes it easy to find all data in regard to any automobile inscribed, to revoked automobile licenses, and the records of chauffeurs and operators. It is also very easy to ascertain in any moment the total amount collected in internal-revenue stamps from the different sources expressed in the automobile law.

RESULTS OBTAINED.

The total amount collected by the insular treasury in internal-revenue stamps during the year 1918-19 reaches the sum of \$106,436.04. The expenses of this office during the same year reaches a total of \$7,530, making a net total balance in favor of the insular treasury in the amount of \$98,906.04.

EXAMINATIONS OF CHAUFFEURS AND OPERATORS.

Formerly the examiner of applicants for licenses to practice as chauffeur or operator was a person without any connection with the department, to whom the commissioner granted in accordance with law, the right to make examinations, paying him a compensation of a dollar for each person examined. But this system of designating a person foreign to the department to conduct examinations did not give satisfactory results, and for this reason, the last legislature, by request, provided in the budget law for the fiscal years 1919-20 and 1920-21, in that part referring to the department of the interior, that the office of examiner of chauffeurs and operators be created. This employee will also be under the orders of the chief automobile clerk and it is hoped in this way to obtain better service in the issuance of licenses for chauffeurs and operators.

No person is allowed in Porto Rico to practice as chauffeur or operator without having taken and passed an examination in which he has shown the theoretical knowledge and sufficient practical ability to drive a motor vehicle. This examination is given, after an application is made on blanks furnished free by the department. This application requires the applicant to give the date of his birth, accompanied by a certificate from the civil registry, and he must state under oath that he believes himself to be mentally and physically able to drive motor vehicles; that he is not suffering from any contagious disease; that he knows how to read and write; that he has never been held guilty of any crime for violations of the laws of Porto Rico or of any State or

Territory in the United States or in any other country; the place of his residence and his employment during the last three years; if he has had any, what practice he has had, if any, in driving motor vehicles and in automobile work shops. Furthermore, said application must contain a medical certificate sworn before a notary, stating the physical capacity of the applicant for driving motor vehicles, two photographs of the applicant, and an internal-revenue stamp of \$1. If the application is in proper form and the applicant is not under 18 years of age, when he wishes to take the examination for chauffeur, or of 16 years in the case of operator of a vehicle of his own, he is given notice of the acceptance of his application, and a date is fixed for the examination. The examination comprises two parts; the theoretical, which consists in satisfactorily answering in writing no less than twenty questions in regard to the motor and other mechanism of the automobile, and the practical, which consists in driving the automobile in the company of the examiner. The practical examination is not granted to persons that do not pass the theoretical examination. After a review being made of the examination by the chief of the office of automobiles, and approved by the commissioner, the license is issued with a numbered copper plate, after previous payment in internal-revenue stamps of \$4, if it is a chauffeurs' license, or \$5 if of a conductor.

STATISTICAL DATA.

In the part related to the development of motor vehicles in Porto Rico since the year 1906 to 1919, a statement is given in which is shown the growing importance of motor vehicles in Porto Rico from year to year and the good results obtained since the enforcement of the present automobile law, approved April 13, 1916, and all statistical data are given below in a statement showing the business during the fiscal year 1918-19.

	Number.	Amount.
Automobile and truck licenses.....	4,769	\$94,866.21
Motorcycle licenses.....	204	728.33
Dealers' licenses.....	25	1,000.00
Duplicate licenses (automobiles).....	162	162.00
Automobile licenses (nonresident).....	14	57.00
Transfers of automobiles and trucks.....	1,831	1,831.00
Transfers of motorcycles.....	43	43.00
New tags issued in lieu of lost tags, for automobiles.....	161	161.00
New tags issued in lieu of lost tags, for motorcycles.....	5	2.50
Applications for examination as motor vehicle driver.....	1,005	1,005.00
Licenses to drive motor vehicles; chauffeurs, at \$4.....	251	1,004.00
Operators, at \$5.....	613	3,065.00
Heavy motor vehicle drivers' license, at \$1.....	573	573.00
Nonresident drivers' licenses.....	18	27.00
Learners' permits, at \$1.....	1,831	1,831.00
Motorcycle operators' license, \$5.....	10	50.00
Certificate of motor vehicle records, at \$1.50.....	20	30.00
Total.....		106,436.04

RÉSUMÉ.

Motor vehicles in operation June 30, 1919:

Motorcycles.....	204
Automobiles, private.....	3,181
Automobiles, public.....	1,005
Automobiles, municipal.....	63
Automobiles, private trucks.....	95
Automobiles, public trucks.....	202
Automobiles, commercial, private.....	176
Automobiles, commercial, public.....	47
Total.....	4,973

LEGISLATION REGARDING PUBLIC WORKS, TENTH LEGISLATIVE ASSEMBLY.

Our legislature in its tenth ordinary session passed important laws in connection with public works in the island of Porto Rico which greatly affect this department. Furthermore under "An act making appropriations for the necessary expenses of carrying on the government of Porto Rico for the fiscal year ending June 30, 1920 and 1921," there were assigned to this department credits far in excess of those granted under budgetary appropriations for the previous year.

The high class of work of the legislative assembly, which is praiseworthy, found a decided cooperation on the part of the department of the interior. Frequent interviews were had with the finance and public works committees explaining with all

possible detail the plans which are being developed, the use given to all funds assigned, the necessity of larger credits for the progressive needs of this department, the increase in cost of living, the difficulties encountered in trying to enforce certain laws and the convenience of modifying others, suggesting in each case the amendments which experience had shown to be necessary.

PERSONNEL OF THE DEPARTMENT—CHANGES MADE DURING THE FISCAL YEAR 1918-19.

Mr. Jesus Benitez was appointed assistant commissioner of the interior on July 15, 1918. Mr. Benitez had been an officer of the bureau of public works of this department from the year 1898 until March, 1911, when he resigned his position as assistant engineer in the bureau of public works.

Mr. Ramón Ramos Casellas, formerly engineer in charge of road construction, was appointed engineer in charge of municipal works on July 1, 1918.

Mr. F. D. Marquez was appointed engineer in charge of road construction, vice Mr. Ramos Casellas.

Mr. Pedro A. Bigay was appointed on October 1, 1918, chief draftsman in the division of public buildings, vice Mr. Wm. H. McCarthy, resigned.

Mr. Pedro A. de Castro was appointed assistant architectural draftsman on December 16, 1918.

Mr. Ramón Rodríguez López was appointed assistant engineer of road construction on July 26, 1918; he was transferred on June 26, 1919, to the health department.

Mr. A. Romero Moreno was appointed June 4, 1919, engineer in charge of general investigations; until said date he was chief engineer of the department of health.

Mr. Enrique Acosta, paymaster in the division of disbursements and accounts, was promoted on July 1, 1918, to chief clerk of the division.

Mr. Luis A. Deliz was appointed on July 19, 1918, as assistant engineer.

Mr. Enrique Palacios, who had previously been chief operator, was appointed assistant superintendent of the telegraph bureau on August 20, 1918.

Mr. J. M. Giles, chief engineer of the irrigation service, resigned his position on May 31, 1919. Mr. Harry V. Latham, formerly engineer in charge of irrigation investigations, and for the past year engaged in making investigations and reports on public-service corporations, was appointed temporarily as chief engineer, effective July 1, 1919.

Mr. Antonio Cosme, formerly assistant to the superintendent of the bureau of insular telegraph, was appointed on August 20, 1918, as assistant superintendent of Carite power plant, and resigned said position on July 1, 1919.

OBITUARY.

The department regrets the loss of Mr. Eduardo Andino, chief clerk of the bureau of public works, who died in the month of May, 1919. Mr. Andino had been a loyal and efficient employee of the department since the year 1898.

SUMMING UP OF RECOMMENDATIONS.

The most important recommendations of the preceding pages may be condensed as follows:

The immediate sale of the third lot of the road fund, amounting to \$1,000,000, to carry on the construction work on road and bridges authorized by the law of April 30, 1916.

An annual appropriation amounting at least to \$1,000,000 for the reconstruction, maintenance, and repair of roads and bridges for the fiscal year 1921-22 and following.

The appropriation for maintenance and repair of public buildings was decreased by our legislature this year, precisely when the buildings, property of The People of Porto Rico, were worst in need of repairs, especially the roofs of the old ones, on account of the damages caused by the earthquake. This appropriation should amount at least to \$100,000, which represents one-half of 1 per cent of the total value of the buildings. This amount is not excessive if we take into account that the buildings are very old, that very little money had been assigned for their maintenance in past years, and consequently very little has been done to make proper repairs and also that constant changes are annually made to accommodate new offices, thus consuming a great part of the maintenance appropriation.

The annual appropriation for the survey of public lands should be increased to \$18,000, as it becomes more urgent every day to complete these surveys. The office and overhead expenses being practically constant, it is evident that the average cost per acre of surveying these lands will decrease by undertaking this work in a larger scale, and it will be more economical therefore to increase the appropriation in order to keep more surveying parties working in the field.

The appropriation of \$10,000 included in the general budget for the reconstruction and repairs of government docks, San Juan port excepted, is very small if it is considered that after the earthquake the sea destroyed the small government pier at Mayaguez and also the landing wharf at Culebra, the construction of new works being necessary.

The offices of the insular telegraph must be installed in a more ample and adequate place where the work of the different branches of the service may be conveniently executed, allowing the necessary reorganization. It is very important also to interest the department of education to hold in two or three high schools of the island special courses for teaching telegraphy, thus giving more facilities for obtaining operators with adequate technical training.

As a bill organizing the service for the inspection of public waters under the direction of this department, introduced in the last session of the legislature, failed to pass, it is recommended that the necessary appropriation to carry on this service be included in the general budget for this department. This new branch of the service will investigate the concession of waters granted in Porto Rico and will gauge all the streams of the island with the object of determining the amount of water available for public purposes in each watershed. I consider of great importance the establishing of this service, as it will serve to regulate the concessions granted for public waters, and to investigate the available sources of water supply for irrigation, waterworks, and industrial purposes.

To sum up, I wish specially to call attention to the spirit of cooperation that has existed throughout all the divisions of the department. The \$2,000,000 road bond fund and the special appropriation made for repairs of public buildings on account of the earthquakes, as well as the investment of a greater amount of money from the municipalities and school boards, have caused a considerable increase in all the activities of this department, and this increase in work has put to a test the leading personnel of each of our bureaus and divisions. If we consider that this personnel to-day is the same in number as it was 15 years ago, we will have to admit that the efforts made by them are most praiseworthy. Special mention must be made of the work performed by the division of public buildings and by the service or road maintenance, who were compelled to double their activities with the increased appropriations assigned to those divisions.

The fiscal year ending June 30, 1919, establishes a record in the history of all the activities of this department. The appropriations made by the last legislative assembly represent the greatest amount ever assigned for public works, and, in my opinion, the legislation enacted comprises matters of more importance than any passed in former years. Special mention must be made of the important works for the irrigation of Aguadilla and Isabela: the appropriation of an additional million dollars for the construction of roads and bridges, the amendments made to the homestead act which will make possible the execution of the provisions of this important law; the assignment made of the balance held by the food commission for the construction of the capitol of Porto Rico making this construction possible, and at last the approval of the new municipal law, which, in my opinion, will allow the construction of many works by the municipalities and school boards, projects for which have been prepared by this department and whose construction had been delayed for lack of the necessary funds.

Although the new municipal law practically eliminates the intervention of this department in municipal works, I firmly believe that we will continue to project and construct these works for the municipalities of Porto Rico, as we have done so far, not as a duty imposed by law, but by reason of the cooperation, efficiency, and economy that we can offer them to carry out these works in which the insular government is interested as much as they are.

Respectfully,

GUILLERMO ESTEVES,
Commissioner of the Interior.

REPORT OF THE GOVERNOR OF PORTO RICO.

Road No.	Length.	Sections.	Broken stone delivered.				By administration.				Total stone delivered.				Stone on hand from last year.		Stone placed.		on hand for the next year.
			By contract.		By administration.		Cubic meters.		Price.		Cubic meters.		Price.		Cubic meters.		Price.		
			Cubic meters.	Cost.	Price.	Cubic meters.	Cost.	Price.	Cubic meters.	Cost.	Price.	Cubic meters.	Cost.	Price.	Cubic meters.	Cost.	Price.		
1	134.8	San Juan-Ponce.....	5,941.00	\$15,249.36	\$2.57	10,299.25	\$16,820.01	\$1.63	16,240.75	\$32,069.37	\$1.49	2,470.50			18,711.25	\$15,592.50	\$13,413.51	\$0.85	3,118.75
2	257.8	Santurce-Ponce via Mayaguez.....	14,795.00	27,215.86	1.88	12,410.00	19,599.73	1.57	27,205.00	47,415.59	1.74	13,771.00			40,976.00	34,284.50	26,055.98	.76	6,741.50
3	198.1	Rio Piedras-Ponce via Fajardo.....	3,544.00	9,253.42	2.61	15,428.50	23,020.15	1.50	18,972.50	32,273.57	1.69	6,045.75			25,016.00	23,058.75	14,996.66	.65	1,959.25
4	26.2	Cavey-Guayama.....	404.00	848.40	2.10	983.50	1,027.19	1.04	1,387.50	1,875.59	1.35	749.00			2,136.50	402.00	548.78	1.36	1,734.50
5	53.8	Barraquitas-Humacao.....	2,485.50	5,747.85	2.25	2,198.85	3,380.43	1.54	4,684.00	9,128.28	1.93	982.50			5,666.50	5,393.00	6,365.68	1.18	273.50
6	8.2	Ponce-Arecibo.....	4,148.00	7,809.15	1.88	2,216.25	1,281.06	1.58	6,364.25	9,090.21	1.41	5,220.75			11,585.00	7,744.50	6,839.34	.88	3,840.50
7	22.4	Caguas-Las Piedras.....				924.00	1,489.05	1.61	924.00	1,489.05	1.61	557.00			1,481.00	883.00	767.43	.87	598.00
8	53	Agua Fria-Adjuntas.....	5,369.00	11,179.34	2.08	1,158.00	2,549.58	2.20	6,527.00	13,728.92	2.10	208.25			2,635.50	5,203.75	4,052.55	.78	1,531.75
9	27.9	Bayamon-Comerio.....	561.50	941.45	1.50	1,171.50	1,834.92	1.56	1,733.00	2,776.37	1.60	319.50			3,199.50	2,052.50	1,974.00	.28	78.50
10	21.9	Tos Alta-Corozal.....	592.00	973.20	1.64	1,837.00	2,929.14	1.54	2,489.00	3,902.34	1.66	1,298.00			3,787.00	2,811.00	1,306.17	.71	976.00
11	34	Manati-Juana Diaz via Ciales.....	1,650.00	2,950.50	1.79	684.00	408.80	.60	2,034.00	3,359.33	1.01	228.50			2,562.50	2,327.00	1,416.14	.61	235.50
13	53	Mayaguez-Arecibo via Maricao.....	4,801.50	9,079.36	2.00	363.00	508.20	1.40	5,164.50	9,587.56	1.86	2,217.00			7,381.50	5,331.75	4,435.49	.83	2,049.75
14	11.3	Consumo-Maricao.....	344.00	678.12	1.97	762.75	790.00	1.04	1,106.75	1,468.12	1.33	42.50			1,149.25	497.25	179.75	.36	652.00
15	48.3	Adjuntas-Albionito via Barros.....	3,490.00	5,924.42	1.64	241.25	421.37	1.75	3,731.25	6,345.79	1.70	1,751.00			5,482.25	3,308.50	1,951.60	.59	2,173.75
16	15.2	Yauco-Lares.....				1,000.00	330.00	.33	1,000.00	330.00					1,000.00	1,000.00	261.20	.26	
18	6.7	Mayaguez-Cabo Rojo.....	340.00	663.00	1.66	21.50	73.70	3.43	361.50	736.70	2.04	36.50			398.00	165.50	53.40	.34	232.50
19	9.5	San German-Guianica.....				92.50	120.00	1.30	92.50	120.00	1.29	320.50			413.00	244.50	83.20	.37	168.50
20	17.7	La Playa-Naranjito.....	532.00	787.35	1.48	774.00	611.11	.79	1,306.00	1,398.46	1.07	578.50			1,884.50	1,811.75	1,635.50	.90	72.75
21	8	Campamento-Morovis Coamo-Sta. Isabel.....				5.00			5.00						5.00	1.50			3.50
22	8.2	Las Cruces-Cidra.....				59.00	42.00	.71	59.00	42.00	.71	2,032.50			2,091.50	2,002.50	1,364.08	.68	89.00
23	6	R. Trujillo-Alto.....				250.00	300.00	1.20	250.00	300.00	1.20	140.50			390.50	107.50	46.44	.43	283.00
24	1	R. Loiza.....				800.00	613.70	.77	800.00	613.70	.77	15.50			815.50	795.50	902.80	1.26	20.00
25	1	R. Guayama.....				214.75	70.00	.34	214.75	70.00	.34	214.75			214.75	206.75	89.24	.19	8.00
26	1	R. Cabo Rojo-S. German.....	1,088.00	2,099.84	1.93	112.00	191.40	1.70	1,200.00	2,291.24	1.91	17.25			1,217.25	388.75	236.60	.60	828.50
27	7	R. Anasco-S. Sebastian.....	400.00	796.00	1.99		20.00		4,000.00	816.00	2.04	92.00			4,000.00	174.00	27.72	.16	226.00
28	21.2	R. Mayaguez-Maricao.....	1,862.00	3,724.00	2.00	1,141.00	1,199.00	1.05	3,003.00	4,923.00	1.64	28.75			3,095.00	1,946.50	1,191.25	.61	1,138.50
29	3.8	R. Mayaguez-Correcional.....				342.00	138.50	.43	342.00	138.50	.43	28.75			370.75	328.25	234.00	.71	42.50
30	10	R. Florida.....				1,193.00	1,013.72	.83	1,193.00	1,013.72	.83	66.00			66.00				66.00
31	12	R. Naguabo-Juncos.....				1,193.00	1,013.72	.83	1,193.00	1,013.72	.83	401.50			1,594.50	1,694.50	599.98	.32	204.00
32	9	R. Catano-Guaynabo.....	436.00	269.00	.62	269.00	612.01	2.28	705.00	1,072.03	2.41	631.00			1,326.00	1,326.00	463.18	.41	57.00
33	9	R. Catano-Bayamon.....	498.00	762.63	1.50				498.00	762.63	1.50	41.00			41.00				41.00

12	R. Vaya-Isla-Morovis.....	0.28	0.00	1,008.13	1.69	86.25	1,009.92	1.34	1,026.25	1,008.13	1.53	828.50	1,854.50	1,854.50	941.95	.53	43.30
3	R. Bayamon-Toe-Alta.....	.....	.....	.....	.....	885.00	3,037.58	1.13	2,683.00	3,037.58	1.24	.....	885.00	885.00	300.92	.36	.....
7.4	Vieques.....	.....	.....	.....	.....	2,823.00	1,000.95	2.00	514.00	1,000.95	2.00	.....	2,683.00	2,683.00	3,237.58	1.20	.....
4	Fajardo-Playa.....	.....	.....	.....	.....	544.00	.....	.....	.....	.....	.....	.....	544.00	544.00	600.00	1.10	.....
	Total.....	54,199.50	109,941.57	2.03	6,122.40	86,643.25	1.41	115,423.50	196,384.82	1.70	41,084.00	156,507.50	126,986.75	97,366.54	75,29,520.75		

N

Isabela
AGUADILL
Isabela

Isabela
MAYAGUEZ
Hermigua
Isabela
ejos
Isabela

Isabela
Isabela
Isabela
Isabela

Isabela
Isabela
San Lorenzo
HUMAC

Yabucoa
Isabela

R

IN

JO



JAY



DRA



M



stures

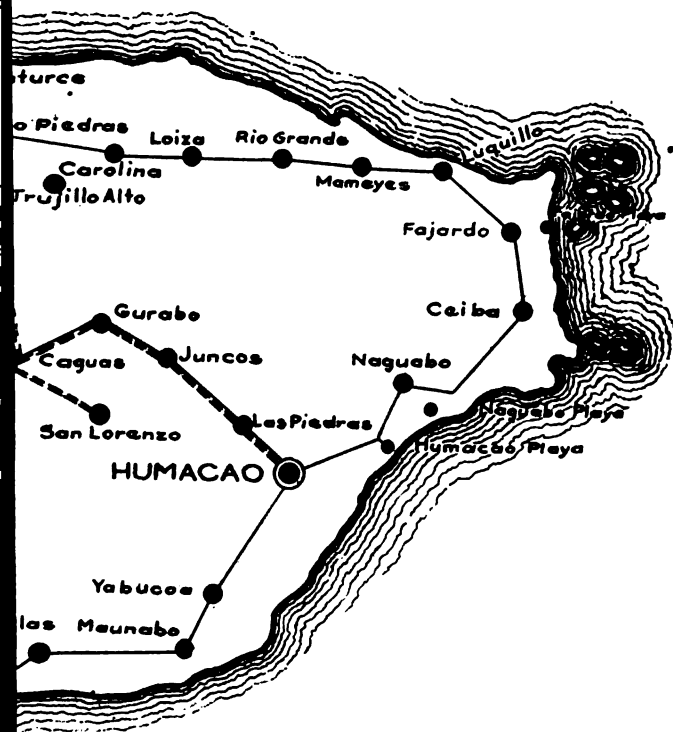
o Pie

C
Trujil

Ca

Sar

las



REFERENCES

- Telegraph lines
- - - Telephone lines

Scale = 1:600,000

APPENDIX VII.

REPORT OF THE COMMISSIONER OF EDUCATION.

OFFICE OF THE COMMISSIONER,
San Juan, P. R., August 23, 1919.

SIR: In compliance with the provisions of law and the terms of your letter of July 7, I have the honor to submit herewith the nineteenth annual report of the department of education. Following the preface and the introductory survey, covering a summary of the data for the fiscal year ending June 30, 1919, this report is divided into three parts, as follows:

Part I.—Two decades of educational progress in Porto Rico under the American Flag.

Part II.—Education in Porto Rico, 1918-19.

Part III.—Supplementary reports.

This last division comprises reports of the commissioner of education in his capacity as president of the board of trustees and chancellor of the university, as president of the board of trustees of the Carnegie Library, and as president of the board of trustees of the teachers' pension fund.

Very respectfully and very truly, yours,

PAUL G. MILLER,
Commissioner of Education

The honorable GOVERNOR OF PORTO RICO,
San Juan, P. R.

INTRODUCTORY SURVEY.

Porto Rico has an estimated population of 1,263,474 of whom 441,465 are of legal school age, i. e., between 5 and 18 years, and 222,783 of compulsory school age, i. e., between 8 and 14 years.

The total enrollment in all schools supported by public funds, excluding duplicates, was 160,794. Of these 97,995 were enrolled in rural schools, 55,073 in elementary urban schools, 3,465 in secondary schools, 2,592 in night schools, 1,176 in the University of Porto Rico, and 493 in summer schools. Of the 160,794 pupils enrolled 89,992 were males and 70,802 females; 126,954 were white and 33,840 colored. (Tables II and III.) In addition to the pupils enrolled in public schools, 5,722 children attended private schools. (Table VI.)

The total enrollment was 36.4 per cent of the total population of school age and 72.1 per cent of the population of compulsory school age; but of the population of compulsory school age only 63.3 per cent were enrolled.

The average number belonging in all schools was 137,352; the average daily attendance was 121,176, or 88 per cent. The low average number belonging and daily attendance as well as the low per cent of promotions are accounted for by the earthquakes and influenza. Of the pupils enrolled, 2.1 per cent were found in secondary schools, 34.6 per cent in elementary urban schools, 61.7 per cent in rural schools, and 1.6 per cent in night schools.

These pupils were taught by 2,984 teachers, of whom 957 are men and 2,027 are women; 143 are teachers from the United States proper and 2,841 are native Porto Ricans; of the total number 2,380 are white and 604 are colored. (Table II.)

Of the elementary pupils 61.8 per cent were promoted to the next higher grade as against 62.7 per cent the preceding year. These figures are based upon the total enrollment. Using the average number belonging as a basis for calculating promotions, 76.7 per cent of the elementary urban pupils and 65.6 per cent of those attending rural schools were promoted.

Two thousand one hundred and eighty four pupils completed the work of the elementary school course and 274 high-school pupils received diplomas.

Summer schools for the training of teachers were held at Rio Piedras and Mayaguez, and at the close of the session 274 rural and 94 graded licenses were issued. Special examinations for the licensing of rural teachers were held in August, resulting in the granting of 300 rural licenses.

There were added 27 new graded teachers, by means of licenses granted upon the basis of normal school diplomas issued by the University of Porto Rico; 183 rural licenses were issued to those candidates who completed the special course for rural teachers in the normal department of the university, and 4 rural licenses were granted to persons who obtained the diploma in agricultural sciences issued by the College of

Agriculture and Mechanic Arts, 16 principal teachers licenses were granted on examination.

The schools of Porto Rico were conducted in 1,724 different school buildings, representing 2,923 different classrooms. Of these buildings 529 are public property and 1,195 are rented; 336 are situated in urban centers and 1,388 in rural barrios. (Table IV.) As to their character, school buildings vary from the straw-covered shack in remote rural districts to thoroughly modern concrete structures in the urban centers.

During the past year 26 new sites for school buildings have been acquired, 7 in urban centers and 19 in rural barrios; 6 graded and 14 rural school buildings have been completed including temporary frame structures to replace buildings destroyed by earthquakes; and 5 graded and 11 rural schools were begun and are in the course of construction.

Continued special attention has been devoted to increasing the food supply. Agriculture was taught in 1,464 different schoolrooms, and 64,721 home gardens were cultivated through the efforts of the schools.

In connection with the agricultural and war propaganda there were conducted 1,846 public meetings. There were also in existence 1,085 parent associations which held 2,742 public meetings. Teachers made 84,667 visits to rural homes and in co-operation with the food commission conducted 1,800 rural conferences.

The total assessed valuation of property in Porto Rico is \$254,166,242 or \$201 per capita of population. The expenditures for educational purposes last year were as follows: By the department of education \$1,626,039.23; by the University of Porto Rico \$162,232.56; by school boards \$679,431.50, making a total of \$2,467,703.29, or an increase of \$141,901, which is largely accounted for by an increase in the outlay for salaries of teachers. (Tables II, VIII, IX, X, XI, and XII.)

The total per capita expenditures per pupil is \$15.57; for elementary education \$13.40, but excluding the cost of buildings and sites \$11.43. The per capita cost of secondary education per pupil is \$37.02; the per capita expenditure per inhabitant is \$1.94.

The total amount expended for textbooks and supplies was \$70,585.28 or 52 cents per pupil enrolled. (Table VIII.)

The net valuation of all school board property, both real and movable is \$3,273,704.46.

During the past fiscal year 67,066 pieces of mail, or an average of 223 pieces per day, were received and dispatched by the department; 57,917 were letters and 9,149 packages.

PREFACE.

The past year has been an unusual one in several ways. It is the first time since the change of sovereignty that a school year of 10 months was made possible by legislative action. The term began on August 5, 1918 and ended May 29, 1919.

The commissioner of education, like other heads of departments, has had burdens not directly connected with the work of the department added to his official duties to such an extent that a considerable part of his time, which should be devoted primarily to education, is taken up with other activities. In addition to his regular duties as commissioner of education, the present incumbent has served in the following capacities: Member of the executive council, member of the public service commission, president of the board of trustees of the University of Porto Rico, chancellor of the University of Porto Rico, president of the board of trustees of the Carnegie Library, president of the teachers' pension board, and chairman of the chapter school committee of the Porto Rico Chapter of the American National Red Cross. Through recent legislative action he has also been made a member of a scholarship commission and of a committee to investigate and pass on pension claims of certain former teachers. The public-service commission has frequently held three meetings a week. With these multifarious demands upon the commissioner's time it has not always been possible to give the closest attention to the work for which he was primarily appointed.

The school work of the year has suffered serious drawbacks through conditions brought about by the war, by the disastrous earthquakes of October 11, 1918, and succeeding dates, and by the epidemic of influenza.

It was impossible to fill all positions available, primarily from lack of teachers who were willing to accept the meager salaries fixed in the budget.

Yet in spite of the obstacles that had to be met, some of which were insurmountable, the school spirit that prevailed at the end of the year and the general appreciation shown by the public for the work accomplished, as well as the very successful commencement exercises conducted in every city, town, and hamlet, plainly showed that, as a whole, the work of the year was a success. The best evidence that the American school system established in Porto Rico is successful is the constant and increasing desire of the people at large to see it greatly extended. The request made by boards for additional schools are far in excess of the present ability of The People of Porto Rico to offer and maintain them.

PART I.—TWO DECADES OF EDUCATIONAL PROGRESS IN PORTO RICO UNDER THE AMERICAN FLAG.

Two decades of educational progress in Porto Rico—Comparative data.

	1898-99	1918-19	Increase.
Population.....	953,243	1,263,474	310,231
Of school age.....	322,363	434,381	111,988
Attending school.....	121,873	160,794	38,921
Of school age not in school.....	300,520	273,587	26,933
Teachers.....	525	2,984	2,459
District supervisors.....	16	41	25
Rural barrios without schools.....	426	20	2406
Public school buildings.....	0	529	529
Rented buildings.....	All	1,195	
Total schoolrooms.....	525	2,923	2,398
School expenditures.....	\$288,098	\$2,467,703	\$2,179,605
For elementary schools.....	274,203	2,077,903	1,803,700
For high schools.....	0	128,306	128,306
For university.....	0	162,232	162,232
Expenditure per inhabitant.....	\$0.30	\$1.94	\$1.64

Percentage of adult illiteracy.....	1899.....	79.9
	1910.....	66.5
	1919 (estimate).....	54
	1 One report gives enrollment as 29,182.	
	2 Decrease.	
	3 Includes rented rooms.	

ORGANIZATION AND ADMINISTRATION.

The following persons have been at the head of the education service of Porto Rico since the change of sovereignty took place:

John Eaton, chief, bureau of education.

December 31, 1898–June 30, 1899.

Insular board of education.

Victor S. Clark, president.

George G. Groff.

Enrique Huyke.

José E. Saldaña.

R. H. Todd.

July 1, 1899–January 7, 1900.

Insular board of education (reorganized with addition of the following men to the above list):

George Bird Arias.

Rosendo Matienzo Cintrón.

Bartolomé Esteve.

J. Ruiz de Sagredo.

January 8, 1900–April 30, 1900.

George G. Groff, acting commissioner of education.

May 1, 1900–August 4, 1900.

M. G. Brumbaugh, commissioner of education.

August 4, 1900–February 8, 1902.

S. M. Lindsay, commissioner of education.

February 12, 1902–October 1, 1904.

Roland P. Falkner, commissioner of education.

October 1, 1904–August 9, 1907.

E. G. Dexter, commissioner of education.

August 9, 1907–July 1, 1912.

Edward M. Bainter, commissioner of education.

July 1, 1912–May 15, 1915.

W. A. Barlow, acting commissioner of education.

May 15, 1915–August 25, 1915.

Paul G. Miller, commissioner of education.

August 26, 1915–

During the American military government the central educational organization constituted a bureau in the department of the interior. By General Orders No. 93, issued July 8, 1899, an insular board of education was established. Under the Foraker Act, which became operative May 1, 1900, an independent department of education was provided. Says Dr. Brumbaugh, the first commissioner of education:

"The departmental organization includes an assistant commissioner, a disbursing officer, a secretary, two stenographers, a bookkeeper, a shipping clerk, a pension

clerk, a record clerk, a file clerk, a copy clerk, a messenger, and a janitor. This organization is now complete, and the business of the department is attended to promptly and, I believe, satisfactorily."

With the gradual extension of the school system there has been an increase in the personnel of the department, so that to-day, in addition to the offices of the commissioner and assistant commissioner, there are three well-defined divisions, each one with its chief and corresponding staff: The division of property and accounts, the division of school board accounts, and the division of supervision and records. The total office force at the present time comprises 27 persons. The secretary and treasurer of the University of Porto Rico also has his office in the department. In addition to the office personnel there is a field force of 41 district supervisors directly responsible to the commissioner of education.

The organization, administration, and work of the department is characterized by a high degree of centralization. Under the terms of the organic act the commissioner of education is given ample powers and wide responsibilities. All expenditures, whether from insular, school board, or university funds, are subject to his approval; all special teachers are appointed directly by him; and all elementary school teachers nominated by school boards must have his approval to make their appointment complete. It has sometimes been charged that this centralized scheme of administration lends itself to abuses, that commissioners have been tyrannical, and that injustices have been committed. Undoubtedly mistakes have been made, but probably none of them purposely. Official actions and decisions characterized as arbitrary and unjust have been performed for the public good and for the benefit of the schools. The department has not hesitated to deal promptly with the incompetent, the immoral, and the insubordinate. It has often been called upon to protect teachers in the service against the machinations of those who tried to oust them from their positions because they failed to comply with the mandates of local caciques. It is largely through this centralized control that the progress attained in education during the past two decades has been accomplished.

ALLOTMENT OF TEACHERS—RURAL V. URBAN SCHOOLS.

The following table shows the allotment of teachers for the 20-year period just closed:

School year.	Rural.	Graded.	Teachers of English.	Night school.	Special.	Preparatory (apprentice).	Manual training and home economics.	Continuation.	Continuation and Industrial.	Agriculture.	Principals.	Supervising principals (supervising schools).	Total for common schools.	Ratio of rural to graded.	Percentage of total "common school teachers" made up by rural.
1898-99.....	313	212										16	541	3.0:2.0	59.6
1899-1900.....	370	212	(1)									16	598	3.7:2.1	54.0
1900-1901.....	409	348									39	16	812	4.3:3.5	53.7
1901-2.....	478	366	45		4						10	16	939	5.3:3.5	53.7
1902-3.....	613	393	135		8					19	46	16	1,220	6.4	53.7
1903-4.....	559	398	123		6					11	33		1,130	5.5:4	51.8
1904-5.....	560	446	93		10					9	34		1,152	5.6:4.5	51.8
1905-6.....	496	431	96		8					22	9		1,062	5.4:3	50.5
1906-7.....	569	434	94		15					17	7		1,136	6.4:3	52.0
1907-8.....	560	440	119	75	10	80				27			1,302	5.6:4.4	50.5
1908-9.....	700	550	137		13	100				34	35		1,569	7.5:5.5	50.5
1909-10.....	896	535	135		13	52				4	17	35	1,687	9.5:5.3	57.3
1910-11.....	950	575	112		13			15			15	40	1,720	9.5:5.7	58.0
1911-12.....	1,050	600	112		16				20	10	10	40	1,858	10.5:6	60.0
1912-13.....	1,050	630	112		20				24	10	10	41	1,897	10.5:6.3	58.5
1913-14.....	1,100	675	150		35	70			50	41	10	41	2,172	11.7:6.7	57.1
1914-15.....	1,325	825	110		20				50		10	41	2,351	13.8:8	58.6
1915-16.....	1,325	825	110					50			10	41	2,361	13.8	58.6
1916-17.....	1,600	825	110		12			50			10	41	2,648	2.1	63.6
1917-18.....	1,650	825	110		12			50			10	41	2,698	2.1	63.6
1918-19.....	1,700	985	110		12			50			10	41	2,908	17:10	60.5

¹ Data for first term only.

These data have been gathered for the years 1899 to 1907, inclusive, from the annual reports of the commissioners of education and after that the allotments made in the appropriation act are given.

During the school year 1898-99 there were 313 rural and 212 urban schools in operation. It must be remembered, however, that these urban schools were ungraded and, as a rule, were in charge of one teacher only. The needs of rural education have been constantly kept in mind and only during the school year 1905-6 was the total allotment of urban teachers greater than that of rural teachers. During the period from 1899-1909 the ratio of urban to rural schools showed little difference, but beginning with the year 1910 there is a little increase each year in rural schools, so that in 1917-18 the number of rural teachers was exactly twice that of the graded teachers, though to the latter must be added the teachers of English and continuation teachers in order to arrive at the correct ratio. For the total 20-year period there has been an increase of 1,387 rural teachers, or 443 per cent, over the original 313; there has also been an increase of 773 graded teachers, or 364 per cent, over the original 212. For the decade from 1909-1919 there was an increase of 1,000 rural teachers, or 144 per cent; and an increase of 405 graded teachers, or 73.6 per cent. During the 5-year period from 1914-1919 there was an increase of 375 rural teachers, or 28.3 per cent, and 160 graded teachers, or 19.4 per cent. Thus it is evident that there has been a very marked increase in the allotment of rural schools made by the respective legislatures in recent years.

Of the total number of teachers employed in the common schools during the past 20 years rural teachers have made up, on the average, 57.4 per cent. During the year 1917-18 the number rose to 63.8 per cent of the total. During the first decade of the 20 year period this average was reached but twice; during the second decade it was exceeded in every year but two. A further reference to the table on school allotments will show that the number of teachers of English employed in the common schools has varied considerably. The highest number was reached in 1914, when there were 150, but during each of the five succeeding years there were only 110. Needless to add, the proportion of teachers of English who possess a thorough knowledge of the English language and are otherwise well qualified to teach it has steadily decreased. Generous increases have been made in the number of graded and rural teachers, but the number of teachers of English has been smaller during the past five years than it was in 1902-3.

EXTENSION OF SCHOOL FACILITIES—ENROLLMENT AND ATTENDANCE.

Complaints are occasionally made that the school system as at present organized does not fulfill its mission, that facilities are not available for many children of school age and that a comparatively small number are actually enrolled in the schools. This charge is abundantly true, but the persons who make it are prone to forget the conditions that existed when the change of sovereignty occurred. Broadly speaking, at that time 1 child out of 15 of school age attended school. During 1918-19 facilities were available for one child out of three of school age. During the year ending June, 1899, there were reported 212 town schools and 313 rural schools. There were 426 rural barrios without any whatever, excluding the municipalities of Barranquitas, Ciales, Comerio, Maunabo, Ponce, Yauco, and Utuado, for which the number was not reported. The last-named municipality included, at that time, Jayuya. Territorially speaking, it is the largest in Porto Rico, and in 1899, with a population of 43,860, it had nine teachers and an attendance of only 262. In that municipality alone there were reported 14,894 school children without school facilities. In Ponce, where the number of barrios without any educational advantages was not available at that time, there were reported 11,563 children without school facilities, and in Yauco 8,819. The enrollment for that year is reported as 19,804 boys and 9,378 girls, a total of 29,182, but only 14,720 boys and 7,153 girls, or 21,873 pupils, were reported to be in actual attendance. The total number of children between the ages of 4 and 16 years, which was then the legal school age, who were without school accommodation, was reported as 268,630. The Federal Census Bureau estimated the school population—that is, those between the ages of 5 and 18 years—to be 434,381 on July 1, 1919. Of this number the total enrollment was 160,381, or more than five and one-half times the number of children enrolled in 1899. The reader's attention is invited to the comparative table giving the number of teachers, the school attendance, and the barrios without schools in 1899, and the number of teachers, the enrollment, the barrios without schools in 1919, and the increase in teachers and pupils. No detailed statistics as to enrollment by municipalities were found for 1899 and consequently the number in actual attendance has been given in each case.

	1898-99			1918-19			Increase in teachers.	Increase in pupils.
	Number of teachers.	Attend- ance.	Barrios without schools.	Number of teachers.*	Enroll- ment.	Barrios without schools.		
Adjuntas.....	6	130	12	41	2,351	0	35	2,221
Aguaíta.....	7	232	14	25	1,568	1	18	1,338
Aguaílla.....	8	542	13	57	3,237	0	49	2,665
Agua Buenas.....	5	175	6	19	1,090	1	14	915
Aibonito.....	6	222	5	27	1,464	0	21	1,242
Anasco.....	7	315	19	38	2,102	2	31	1,787
Arecibo.....	11	683	4	108	5,457	0	97	4,774
Arrovo.....	3	201	6	22	1,070	0	19	869
Barceloneta.....	6	230	-----	25	1,322	0	19	1,092
Barranquitas.....	4	143	5	24	1,299	0	20	1,156
Barros.....	5	181	13	51	3,504	0	46	3,323
Bavamon.....	10	468	15	77	3,474	0	67	3,006
Cabo Rojo.....	7	325	3	51	2,617	0	44	2,292
Caguas.....	9	417	5	81	4,162	0	72	3,745
Camuy.....	5	206	9	34	1,795	1	29	1,589
Carolina.....	6	218	9	41	2,637	0	35	2,419
Cayey.....	8	573	16	45	1,951	3	37	1,378
Cayey, ¹ included in Fajardo.....	-----	-----	-----	15	675	0	15	675
Ciales.....	7	245	-----	40	2,411	0	33	2,166
Cirúa.....	5	184	9	27	1,133	1	22	949
Coamo.....	9	494	3	49	2,847	0	40	2,363
Comerio.....	7	331	-----	29	1,821	0	22	1,290
Corozal.....	5	211	8	29	1,643	0	24	1,433
Dorado.....	4	119	4	18	858	0	14	739
Fajardo.....	13	597	12	49	1,863	0	36	1,266
Guainabo, ¹ included in Ba'amon.....	-----	-----	-----	24	1,078	0	24	1,078
Guánica, ¹ included in Yauco.....	-----	-----	-----	26	1,203	0	26	1,203
Guayama.....	9	391	5	57	2,598	0	48	2,202
Guayanilla.....	5	167	12	34	1,637	0	29	1,480
Gurabo.....	5	258	6	25	1,482	0	20	1,294
Hatillo.....	6	191	3	26	1,539	0	20	1,248
Hormigueros.....	4	68	3	14	582	0	10	514
Humacao.....	11	411	2	55	2,717	0	44	2,306
Isabela.....	8	225	7	38	2,151	0	30	1,926
Ja'uya, ¹ included in Ututo.....	-----	-----	-----	25	1,587	0	25	1,587
Juana Díaz.....	13	475	12	45	2,299	4	32	1,814
Juncos.....	6	215	5	31	1,707	0	25	1,492
Lajas.....	6	99	6	33	1,692	0	27	1,530
Lares.....	10	253	4	51	3,236	1	41	2,963
Las Marias.....	8	125	6	30	1,645	0	22	1,520
Las Piedras.....	3	105	6	20	1,088	0	17	963
Loíza.....	7	219	4	36	1,890	0	29	1,661
Luquillo, ¹ included in Fajardo.....	-----	-----	-----	15	883	0	15	883
Manatí.....	8	408	3	42	2,312	0	34	1,904
Maricao.....	4	119	4	27	1,432	0	23	1,313
Maunabo.....	4	150	-----	19	918	0	15	768
Mavaguez.....	33	1,178	4	102	4,740	0	99	3,683
Moca.....	6	146	7	24	1,631	0	18	1,486
Morovis.....	7	269	9	28	1,612	0	21	1,353
Naguabo.....	5	272	6	33	1,591	0	28	1,319
Naranjito.....	5	152	4	20	1,141	0	15	989
Patillas.....	6	232	2	30	1,401	0	24	1,169
Penuelas.....	8	263	8	32	1,485	0	24	1,222
Ponce.....	38	1,748	-----	192	9,554	0	184	7,806
Quebradillas.....	4	274	5	27	1,292	0	23	1,018
Rincon.....	5	74	5	27	978	0	12	804
Rio Grande.....	7	356	7	34	1,863	1	27	1,507
Rio Piedras.....	5	294	8	50	2,897	0	45	2,608
Sabana Grande.....	5	210	4	32	1,417	1	27	1,207
Salinas.....	3	118	5	32	1,665	0	29	1,547
San German.....	12	590	10	60	3,334	0	48	2,744
San Juan.....	15	1,113	-----	174	8,030	0	159	6,917
San Lorenzo.....	5	230	7	32	1,856	0	27	1,666
San Sebastian.....	8	326	19	39	2,518	2	31	2,185
Santa Isabel.....	6	228	4	21	898	0	15	670
Toa Alta.....	4	167	5	24	1,335	0	20	1,168
Toa Baja.....	4	184	2	24	1,119	0	20	985
Trujillo Alto.....	4	103	4	19	1,006	0	15	903
Ututo.....	9	262	-----	68	4,396	0	59	4,044
Vega Alta.....	5	192	4	21	1,049	0	16	867
Vega Baja.....	8	303	9	35	2,011	0	27	1,768
Vieques.....	6	166	5	25	1,226	0	19	1,080
Villalba, ¹ included in Juana Díaz.....	-----	-----	-----	24	1,195	3	24	1,195
Yabucoa.....	7	450	5	22	2,485	0	41	2,055
Yauco.....	15	682	-----	70	3,698	0	55	2,926
(Culebra).....	-----	-----	-----	3	143	0	3	143
Total.....	525	21,673	426	3,035	159,125	20	2,510	137,252

¹ Not a separate municipality in 1898-99. Reported as barrio of town written opposite.

* Includes 83 night-school teachers.

From the preceding table it is apparent that at the present time there are only 20 barrios in Porto Rico without any school facilities. The increase in teachers and pupils has been remarkable indeed. There has been an increase in enrollment of 137,252, the percentage over that of 1899 being 627.5. The increase in the number of teachers is 2,510, including 83 evening school-teachers, and the percentage over 1899 is 478. In 1899 the average number of pupils per teacher was 41; in 1919 it was 52. On the basis of the 41 school districts into which Porto Rico is divided at the present time there were in 1899 an average of over ten rural barrios per district without schools. This number has been reduced to an average of one rural barrio for every two districts. In 1899 there were approximately four barrios without schools for every five teachers employed; in 1919 there was one barrio without schools for every 152 teachers employed. The following municipalities show the greatest increase in school enrollment:

	Per cent increase.
Utusado-Jayuya (reported together in 1898-99).....	2, 149
Barros.....	1, 835.9
Adjuntas.....	1, 708.4
Lajas.....	1, 545.4
Salinas.....	1, 311
Rincón.....	1, 221.6
Las Marías.....	1, 216
Lares.....	1, 179
Maricao.....	1, 103.4

From the data on school population and total enrollment for 1919 it appears that there are at the present time 273,587 school children without school facilities. These figures, however, do not mean that these 273,587 children have never been in school. The legal school age extends from 5 to 18 years. The rural school course comprises, as a rule, only four years of work. Consequently, any given pupil might complete the rural school course four times during the period that he is of legal school age. No one can truthfully say that all these 273,587 children have not enjoyed school facilities or that they are all illiterate. No figures are available to show how many of them have attended school for a limited time.

When the Porto Rican recruits, a large majority of whom came from the country, were called to Camp Las Casas for military service it was reported that a great many of them were illiterate. The exact number was not disclosed by the military authorities. The percentage currently given was 50. This condition was seized upon by some to denounce the public school system as a failure. An examination of the comparative table of school allotments reveals the fact that the total number of rural schools in existence when the youngest of these recruits had attained the maximum compulsory school age of 14 years was only 950, whereas the rural school population required 4,000. Since that time the total number of schools has been increased by 1,011, and rural schools alone were increased from 950 in 1910 to 1,650 in 1917. If the state of illiteracy amongst the recruits proved anything at all it was the insufficiency of school facilities rather than the failure of the system. On the other hand, the very fact that 50 per cent of the recruits were literate is a living testimonial to the efficacy of the schools, because it should not be forgotten that the total number of men drafted was not far above the total number of boys enrolled in 1899, and the number of men registered for military service during the first registration constituted less than one-tenth of the total population.

However, no one should be blind to the fact that the percentage of illiterate recruits in Porto Rico is an index of the tremendous unsolved educational problem still before the people of Porto Rico, in spite of their persistent and highly praiseworthy efforts to solve this problem. Merely eliminating illiteracy is the lowest possible educational standard that can be accepted from the modern sociological standpoint. Teaching a person how to read and write does not give him an education. Other and more important factors are necessary to make the individual an efficient, useful, and well-behaved member of society. The country child has as much right to a complete elementary course of instruction as the one who attends school in the urban zone, but with present facilities he, at best, must be content with half the amount of schooling ordinarily given to the child in town. To remedy this condition to give equality of opportunity to all children, is still an unsolved problem.

As to expectation of results, Dr. Brumbaugh, in his first report, says:

"In general, it is safe to assert that the schools are more satisfactory to the native citizen than to the American who has not yet learned the ideals and racial characteristics of this people. The citizens of Porto Rico have been led to expect immediate changes of great moment. These have not come. They can not. A school is an evolution. It can not be decreed by any man's fiat.

"What of the future? There are many perplexing problems to be met. There is a way to do this. It is possible to reduce the great illiteracy in Porto Rico. It must be done. The hope of the island is in the public schools. If these people are to share more and more in the large life of a pure democracy, they must be fitted for such enlarged participation by education. An educated people alone can maintain republican institutions."

Education is a spiritual process whose results are cumulative and can not be measured by material standards. The increase in the number of kilometers of highway constructed during a given period or the decrease in the death rate brought about by improved hygienic conditions can be definitely measured and expressed in figures. Such is not the case with education.

At the present time school facilities are far from adequate not only in rural barrios, but also in towns and cities; not only for those who are within the compulsory school age and should be obliged through legal means to attend school, but even for those who of their own volition desire to enroll and for whom no room is available. In San Juan, the capital city, 1,200 children who actually presented themselves for enrollment had to be turned away during the three successive years, 1916, 1917, and 1918, because accommodations were not available. This eager desire on the part of the children to attend school and the clamor of the public in general for more schools serve as eloquent testimonials of their approval of the present system.

The highest total enrollment for any one year was 207,010 for 1914, the year of the so-called "big budget." Immediately thereafter retrenchments were made because of the economic crisis; many teachers of a special character were eliminated from the budget. On the other hand, during that year the average enrollment per teacher was 81 and at least one classical case is on record where 250 pupils were enrolled in a single rural school, taught by a girl 18 years of age. Since that time the department has abandoned the policy of striving after mere numbers and has placed the stress on thorough work. The enrollment per teacher has been limited in harmony with common sense and reasonable expectations as to positive results.

In making future provision for school extension consideration should be given first and always to the establishment of more rural schools. Although many country children attend urban schools the fact remains that there are many thousands who can not enter school until very late or not at all. During the past school year there were enrolled in the first grade of the rural schools 4,286 children who were 12 years of age or over, some of them being 18; whereas in the graded schools only 677 children 12 years of age or over were enrolled in the first grade. These figures speak for themselves.

SCHOOL EXPENDITURES.

Let it be said to the credit of the people of Porto Rico that their legislatures have been liberal in the matter of financial support of public education. Although teachers' salaries have never been high and are far from sufficient at the present time, a comparison of the expenditures for education by the insular government with the total revenues shows that a very generous share of the latter has been used for the promotion and maintenance of education. The same thing is true of local authorities. In 1905 there was enacted a law providing for a school tax not to exceed one-tenth of 1 per cent of the assessed valuation of all real and personal property within the respective municipalities, and which constituted an addition to the regular property tax and was to be levied by the municipal councils for the use of the respective school boards. The imposing of this tax was not made compulsory, but the municipal councils of Porto Rico almost without exception have levied it from year to year and, generally speaking, the tax has been at the maximum rate fixed, thus giving school boards a very necessary increase in the revenues at their disposal, though in some cases considerable urging has been required on the part of the department in order to secure action within the time limit specified by law.

The reader is referred to the accompanying table of "Expenditures for educational purposes and per capita costs, years ending June, 1899, to 1919."

The aggregate amount expended for the extension and support of education during the two decades is \$28,459,120. Of this grand total the insular government spent \$20,716,374 and school boards \$7,742,745. Of this sum \$24,072,903 were used for the support and promotion of elementary education.

The university of Porto Rico has cost since the organization of the normal school in 1901, the sum of \$1,644,991. This amount includes not only moneys derived from sources other than legislative appropriations, but also the Morrill-Nelson funds received from the Federal Government.

The people of Porto Rico have spent \$995,643 for secondary education and \$168,050 for industrial schools.

The total amount invested in textbooks and school supplies is \$1,179,538, or an average of 52 cents per pupil enrolled.

For a period of years the legislatures have made provision for scholarships both in Porto Rico and in the United States. Students who pursued their studies in the United States received \$180,693 and those who remained in Porto Rico \$140,311, making a total of \$321,004 for scholarships.

The people of Porto Rico have invested \$2,589,627 in school buildings. Of this amount \$822,744 were expended by the insular government and \$1,766,883 by school boards.

The grand total of money invested in education may have the appearance of being liberal indeed, and when one considers the entire resources of Porto Rico and expenditures for other governmental purposes this is quite true. Nevertheless, a study of per capita costs leads one to the conclusion that expenditures not only in proportion to the needs but in relation to the number of pupils enrolled have been low indeed. In other words, education in Porto Rico is cheap. The average cost per pupil per year for the 20-year period is only \$12.67, covering all items and all grades of schools from the first grade to the university, inclusive. It is safe to state that no other agency could have attempted the work of education at so low a per capita cost.

A further study of the table referred to reveals the fact that the total outlay for education increased from \$288,098 in 1899 to \$2,467,703.29 in 1919.

The first record of expenditures by school boards is available for the year 1900, when \$83,063 were disbursed by local authorities. During the past year the total expenditure was \$679,431.50. The highest amount spent by school boards was during the fiscal year 1917-18, when \$730,947 were disbursed. There has been a marked gain in school-board expenditures beginning with the year 1908. This increase is largely accounted for by the fact that the erection of school buildings has been undertaken through the aid of loan funds.

No figures are available to indicate the amount of money spent by school boards for rent of school buildings before 1904, when the present system of accounting was established. During the 15 years since that date \$1,295,031.25 have been paid for rent, which still forms the most important item in many school-board budgets. This sum is more than half of the total expended on the construction of school buildings during the 20-year period. Had the money paid out in rents been used for the erection of schools, the aggregate sums expended to date would have been sufficient for the construction of 129 buildings at a cost of \$10,000 each, or for 64 buildings at a cost of \$20,000 each, or for 1,295 rural schools at a cost of \$1,000 each. This sum of \$1,295,031.25 is sufficient to replace at prewar prices all of the buildings rented during the past year with standard modern structures adapted to the needs of the schools.

The highest amount was spent by the insular government in 1914, with a total of \$1,970,098. During the same year school boards disbursed \$728,165, thus making a total for that year of \$2,698,263, the largest amount of money paid out for educational purposes in any one year during the past two decades. The entire expenditure from insular funds for the fiscal year just closed was \$1,788,271, of which amount \$162,232 were for the support of the university.

A study of the classification of expenditures reveals some interesting facts. In the first place, it is evident that 84.5 per cent of all funds invested has gone to the support of elementary schools. The expenditure for elementary schools has risen from \$274,203 in 1899 to \$2,077,903 in 1919, though in 1914 the total amount for elementary schools was \$2,287,669.

Occasionally the argument is advanced that secondary education should be paid for privately in order to permit the use of funds now employed in high schools for the reduction and elimination of illiteracy. The entire sum spent for secondary education is very small indeed; in 1901 two high schools were maintained, one in San Juan and one in Ponce. These have gradually been increased in number to 11, and where originally there were only 49 pupils enrolled during the school year 1899-1900, this number has risen to 3,465 pupils in 1918-19. The increase in expenditures, however, has been far from proportionate to the gain in enrollment and to the need of providing facilities for instruction and housing the high schools. The total amount expended on high-school instruction during the year just passed is only 6 per cent of that spent for elementary education.

Expenditures of the University of Porto Rico have risen from \$4,850, in 1901, which was used for the support of the normal school before the present university act became operative, to \$162,232 during the past year. During two years, however, the University used considerably more money namely, in 1913 and 1914.

The office and field expenses of the department, together with miscellaneous expenses, have risen from \$13,498 in 1899 to \$113,864 in 1919. This increase is fully justified because of the extension of the school system and the increase in the necessary personnel and the corresponding miscellaneous expenditures.

The cost of books and supplies per pupil enrolled was highest in 1899, when it amounted to \$1.71, and lowest in 1916, when the average per pupil was only 30 cents. It was only natural that the cost per pupil should be higher during the first years, because all the old textbooks had been gathered up and were being replaced with new and modern books. At no time since 1902 has the per capita cost of books and supplies been excessive, as a study of the figures will show, and the average for the 20-year period is only 52 cents.

As to whether or not a school system is expensive and costs too much in proportion to results attained, may be gathered not from the amount of money expended but from the expense per pupil. During the year just closed the cost of education per pupil was \$15.57; the cost of elementary education per pupil was \$13.40; that of secondary education per pupil was \$37.02. A liberal proportion of this average cost, however, must be charged not to current expenditures, but to permanent investments in the way of buildings and equipment. For instruction and maintenance the cost per elementary pupil only \$11.43 whereas the expense for buildings and sites was \$1.97. A study of the cost per capita reveals the fact that there has been little variation during a period of 20 years. In 1900 it was \$15.46, and this figure has not been surpassed until last year, but eliminating the per capita cost of buildings and sites, the expense per pupil in 1900 has never been equaled since that time, and the average for the 20-year period is only \$12.67. The insufficiency and inadequacy of the present school system to cope with the educational problem of Porto Rico is best shown by the fact that in spite of the gain in total expenditures from year to year, there has been no marked increase in the cost of education per pupil, which shows conclusively that with increased expenditures additional pupils have enrolled in the schools.

A comparison with other countries also brings out the fact that in Porto Rico education is cheap. In other words, we expect and demand great results from a small outlay of money. In 1916 when the expenditure per pupil in Porto Rico, including cost of buildings, sites, instruction, and maintenance, was only \$12.14, that per pupil for all grades of schools in the United States was \$39.37, and for public elementary schools \$29.55. In Porto Rico per pupil it was \$15.46 in 1900, whereas in the United States it was only \$12.80 during the same year. In the United States this per capita cost per pupil during the period has been more than doubled. In Porto Rico it has remained practically stationary.

A study of the per capita costs in the most progressive Latin American countries also shows that they are spending considerably more money than Porto Rico. In 1916 Cuba expended \$17.16 per pupil; Uruguay \$21.79; and Argentina \$26.72.

The cost of education per inhabitant has risen from 30 cents in 1899 to \$1.94 in 1919. Apparently this expense is very low indeed, but as a matter of fact, when one considers that the per capita wealth of Porto Rico is only \$201, whereas in the United States it is estimated at \$2,200, the opposite conclusion is patent. The people of Porto Rico do not possess resources sufficient to solve their educational problem in manner becoming American citizens and especially to prepare the rising generation for the duties, responsibilities, and benefits that American citizens should have as their own.

Expenditures for educational purposes and per capita cost, years ending June, 1899 to 1919.

Year.	Population of Porto Rico.	School population.	Enrollment.	Insular revenues.	Expenditures for education.	Expenditures for education by insular government.
1899	953,243	322,393	29,172		\$288,098.00	\$288,098.00
1900	964,746	325,002	24,392	\$1,531,094	377,111.00	294,068.00
1901	976,841	328,194	38,000	2,074,894	530,662.00	418,125.00
1902	988,007	332,497	61,969	2,282,152	753,545.00	635,335.00
1903	1,000,907	336,228	70,216	2,305,935	803,879.00	642,906.00
1904	1,012,202	340,926	61,270	2,263,216	873,603.00	691,020.00
1905	1,023,717	345,805	63,413	2,520,272	878,868.00	674,510.00
1906	1,035,429	350,111	68,828	2,554,554	905,929.00	656,658.00
1907	1,047,699	354,721	72,052	3,538,241	918,516.00	686,657.00
1908	1,060,477	360,551	80,167	3,371,541	1,093,311.00	750,537.00
1909			105,125	3,180,111	1,427,451.00	989,965.00
1910	1,118,012	390,640	121,453	3,451,207	1,371,490.00	952,329.00
1911			145,525	3,986,746	1,394,380.00	990,689.00
1912			160,657	4,369,164	1,518,779.00	1,132,344.00
1913			161,785	4,382,544	1,814,829.00	1,235,485.00
1914			207,010	4,753,903	2,698,263.00	1,970,096.00
1915	1,200,000	419,282	168,319	5,727,910	2,070,496.00	1,477,816.00
1916			151,662	4,133,158	1,840,016.00	1,348,306.00
1917	1,223,981	427,666	152,063	4,957,684	2,106,389.00	1,518,322.00
1918	1,223,981	427,668	141,589	4,741,716	2,325,802.00	1,594,855.00
1919	1,263,474	434,381	160,794	5,456,409	2,467,703.29	1,788,271.79

Expenditures for educational purposes and per capita cost, years ending June, 1899 to 1919—Continued.

Year.	Expenditures for education by school boards.	Expenditures classified.				Office and field expenses of department and miscellaneous expenditures.
		Elementary school.	High schools.	Industrial schools.	University of Porto Rico.	
1899		\$274,203.00		\$397.00		\$13,498.00
1900	883,063.00	347,821.00				29,290.00
1901	112,537.00	472,944.00	\$11,800.00		\$4,850.00	41,068.00
1902	118,210.00	664,045.00	12,052.00		10,698.00	51,752.00
1903	159,973.00	669,921.00	24,361.00	16,227.00	13,973.00	64,532.00
1904	182,583.00	702,132.00	33,273.00	28,873.00	18,428.00	72,258.00
1905	204,358.00	687,128.00	38,560.00	35,643.00	20,000.00	70,161.00
1906	246,271.00	781,954.00	35,957.00	26,196.00	23,200.00	68,655.00
1907	267,850.00	750,631.00	43,206.00	19,242.00	19,785.00	65,876.00
1908	340,774.00	931,990.00	46,350.00		20,507.00	71,719.00
1909	437,485.00	1,235,432.00	21,854.00		95,974.00	43,518.00
1910	419,161.00	1,185,164.00	21,857.00		90,740.00	43,233.00
1911	403,691.00	1,194,367.00	27,626.00		105,000.00	42,349.00
1912	386,435.00	1,267,063.00	31,503.00		151,969.00	44,475.00
1913	579,344.00	1,483,476.00	32,128.00		227,975.00	46,999.00
1914	728,165.00	2,287,569.00	87,046.00	44,472.00	192,112.00	63,044.00
1915	592,680.00	1,849,481.00	75,808.00		78,187.00	54,273.00
1916	491,710.00	1,526,202.00	95,124.00		121,368.00	89,708.00
1917	588,067.00	1,775,304.00	112,375.00		141,317.00	92,960.00
1918	730,947.00	1,958,203.00	116,457.00		146,678.00	103,963.00
1919	679,431.50	2,077,903.19	128,306.00		162,232.56	113,864.14

Year.	Expenditures classified.					
	Salaries of teachers in elementary schools.	Textbooks and school supplies.	Expended for school buildings.		Scholarships.	
			By insular government.	By school boards.	In Porto Rico.	In United States.
1899.	\$205,752.00	\$50,026.00				
1900.	204,107.00	35,199.00	\$4,804.00			
1901.	266,010.00	40,843.00	17,865.00			
1902.	320,357.00	40,044.00	156,549.08			\$15,000.00
1903.	389,192.00	40,636.00	67,729.00			14,865.00
1904.	397,570.00	32,377.00	70,852.00		\$4,628.00	14,010.00
1905.	389,622.00	31,911.00	48,967.00		12,979.00	14,397.00
1906.	396,867.00	25,702.00	55,965.00		5,193.00	14,775.00
1907.	424,527.00	35,787.00	26,726.00		5,176.00	14,600.00
1908.	508,503.00	31,065.00	45,798.00	\$107,684.00	8,421.00	14,354.00
1909.	647,520.00	42,668.00	100,787.00	91,101.00	20,034.00	10,639.00
1910.	675,942.00	47,337.00	35,748.00	64,007.00	20,534.00	9,962.00
1911.	715,745.00	53,400.00	14,114.00	51,448.00	16,624.00	8,413.00
1912.	778,055.00	66,390.00	26,447.00	35,819.00	15,472.00	8,297.00
1913.	800,600.00	76,514.00	17,730.00	125,459.00	15,792.00	8,459.00
1914.	1,347,165.00	129,798.00	54,180.00	289,494.00	15,458.00	8,562.00
1915.	1,078,498.00	104,225.00	77,537.00	198,361.00		12,746.00
1916.	984,471.00	46,582.00		150,318.00		7,614.00
1917.	1,110,563.00	69,500.00		152,542.00		3,500.00
1918.	1,108,306.55	109,949.63		325,557.00		500.00
1919.	1,314,516.22	70,585.28	936.36	175,103.58		

Expenditures classified.

Year.	Expenditures classified.						
	Cost of books and supplies per pupil enrolled.	Total for education per pupil.	Elementary education per pupil.			Cost of secondary education per pupil.	Cost of education per inhabitant.
			Total cost.	Instruction and main-tenance.	Buildings and sites.		
1899.....	\$1.71	\$0.88	\$9.40	\$9.40			\$0.202
1900.....	1.44	15.46	14.26	14.06	\$0.20		.391
1901.....	1.07	13.61	12.45	11.98	.47		.543
1902.....	.65	12.18	11.24	8.59	2.65		.768
1903.....	.58	11.45	10.28	9.24	1.04		.797
1904.....	.33	14.26	12.00	10.79	1.21		.863
1905.....	.50	13.86	11.52	10.70	.82		.85
1906.....	.37	13.16	11.90	10.99	.91		.875
1907.....	.50	12.75	11.47	11.06	.41		.877
1908.....	.39	13.64	12.58	10.51	2.07		1.031
1909.....	.41	13.58	12.71	10.74	1.97	\$68.94	1.277
1910.....	.39	11.29	10.63	9.74	.89	42.11	1.227
1911.....	.37	9.58	9.30	8.79	.51	45.97	1.317
1912.....	.41	9.45	8.96	8.52	.44	34.62	1.354
1913.....	.47	11.12	10.20	9.22	.98	25.62	1.623
1914.....	.63	13.03	12.67	10.77	1.90	64.67	1.762
1915.....	.54	13.68	11.75	10.00	1.75	45.31	1.725
1916.....	.30	12.14	10.07	9.08	.99	54.11	1.533
1917.....	.43	13.85	12.07	11.07	1.00	34.10	1.77
1918.....	.77	15.39	14.16	11.81	2.35	34.80	1.93
1919.....	.523	15.57	13.40	11.43	1.97	37.02	1.94

SCHOOL BOARDS.

During the Spanish régime each municipality had a school board of five members, composed of the alcalde, the priest, and three heads of families. They had no funds at their disposal and had to depend upon the municipalities for the fulfillment of the obligations which they contracted. Consequently, teachers' salaries oftentimes remained unpaid for many months, and the schools were not supplied with the necessary books and equipment. One of the first steps taken during the present régime was to place school boards on a new basis. At first they consisted of five members, three belonging to the majority and two to the minority party. In 1901 this organization was abolished and school boards consisting of three members were elected by popular vote. The boards were given ample power to hold in their corporate names the title to lands and other property acquired for school purposes; to be in charge of school buildings in their respective districts; to erect, repair, remodel, and improve school property; to rent buildings for school purposes; to provide suitable furniture and equipment; to employ janitors; to nominate principal, rural, and graded teachers; and, in general, to perform such duties as the commissioner of education might require in accordance with the school law. Thus school boards became well-established governmental entities, with definite powers and responsibilities and were held in proper esteem by the public. They have exercised the powers intrusted to them for the advancement of the schools, and, with the exception of occasional cases of friction, due to misunderstanding rather than to lack of good will, they have cooperated loyally with the department to promote the work of education within the means at their disposal. The services they have rendered to their respective communities have, as a rule, been of a highly commendable character.

SCHOOL BOARD FINANCES.

With the reorganization of school boards in 1901 these bodies were given definite sources of income, consisting of revenues derived from the school fund, to which there was added in 1903 the school tax, referred to in another part of this report.

Up to July 1, 1904, no definite system of school finances and accounting existed, so that at the present time exact figures as to receipts and disbursements up to the date mentioned are not available for a comparative study. This lack of system resulted in financial difficulties to such an extent that on June 30, 1904, school boards were indebted in the amount of \$51,368.65. This indebtedness would probably have increased from year to year had the necessary steps not been taken to establish a suitable and proper system of accounting in order that expenditures might be regulated in harmony with revenues, and also to wipe out the existing indebtedness.

Commissioner Roland P. Falkner prescribed and introduced the system of school board accounts, which has been in vogue since July 1, 1904, and which has been of

invaluable assistance not only to the department, but principally to school boards themselves in the management of their financial affairs. Blank forms for preparing and presenting the budget of receipts and expenditures and books for keeping the accounts, as well as all other blanks necessary for an efficient system of accounting, were prescribed. Rules and regulations and supplementary instructions governing school board accounts have been issued from time to time. School treasurers were required to give bonds. All funds received by boards were deposited in banks. All payments were made by check drawn on the bank. The practical results of these reforms are apparent when one considers that the deficit of \$51,368.65 of June 30, 1904, had been made good, and the balance of \$8,831.93 on hand on that date was converted into a balance of \$88,592.75 at the close of the fiscal year 1906-7.

As a result of this system, when school boards definitely knew the amount of their resources, they were able to do far more in the way of promoting school extension and supplying existing schools with the necessary equipment. But far more important than these things, school boards were enabled to undertake the contracting of loans for the purpose of erecting school buildings, paying the principal and interest from the balances that accrued from year to year and which could be calculated in advance with reasonable exactness. Consequently the burden of erecting school buildings has been shifted almost entirely from the insular government to school boards.

In addition to the ordinary expenditures, school boards are required by law to contribute to the pension fund for teachers. Some of them assist in the establishment and maintenance of school lunch rooms. Boards have also been authorized to grant scholarships to poor pupils from the country schools so as to enable them to continue their studies in graded schools and to a limited number of pupils who desire to make preparation for teaching in rural schools.

The gradual increase in the receipts and the expenditures are evident from the subjoined table. The total income, including available balances, was greatest in 1916-17, with a total of \$1,211,018.45. Expenditures were highest in 1917-18 when they reached a total of \$838,074.57. The largest available balance on hand at the close of the year was \$554,742.10 in 1916-17. These figures, of course, include loan funds as well as regular revenues.

At the close of the fiscal year 1918-19 there was a balance on hand of \$320,236.09 without any indebtedness whatever, excepting installments due on loans contracted for the erection of school buildings. The total receipts for the year from current revenues as well as from loan funds amounted to \$724,189.46, which, added to the balance on hand on June 30, 1918, forms a total of \$1,075,159.91. It should be stated that the sum of \$724,189.46 includes \$100,478.60 retained by the treasurer of Porto Rico from revenues due school boards for the purpose of refunding the principal and paying interest on loans.

Not counting the amounts retained by the treasurer of Porto Rico in payment of the principals of loans, the total expenditures for the past fiscal year amounted to \$679,431.

The total sum borrowed by school boards by means of loan ordinances from 1904-5 to date is \$1,098,901. Without a well organized system of school board accounting financial transactions of this kind would have been impossible.

Following is a comparative statement showing the financial operations of school boards for the years for which data are available:

Comparative statement.

Fiscal year.	Balance on hand June 30.	Total income, including balance.	Total disbursements.	Indebtedness from former years.
1902-4.	\$8,831.93			\$51,368.65
1904-5.	25,396.27	\$245,760.63	\$220,364.26	27,342.14
1905-6.	43,878.24	304,693.94	260,815.70	9,215.27
1906-7.	88,592.75	346,451.79	257,859.04	1,911.75
1907-8.	116,438.16	504,481.26	388,043.10	
1908-9.	127,213.59	564,699.57	437,485.98	
1909-10.	143,074.26	602,236.15	419,161.89	
1910-11.	181,622.07	585,613.64	403,691.57	
1911-12.	269,881.17	700,862.38	430,961.21	
1912-13.	265,920.43	845,264.38	579,343.96	
1913-14.	273,566.18	1,001,731.48	728,165.30	
1914-15.	319,475.18	912,154.72	592,679.54	
1915-16.	260,069.21	812,422.89	552,353.68	
1916-17.	554,742.10	1,211,018.45	656,276.05	
1917-18.	367,028.96	1,205,103.55	828,074.57	
1918-19.	320,236.09	1,075,159.91	754,923.82	

¹ Includes \$75,492.32 retained by treasurer of Porto Rico to pay installments of principal due on loans. The total expenditures for the year are \$679,431.50.

Because of the lack of reliable data, it is impossible to state exactly the value of school property on the date that the present system of accounting was instituted, but a reasonable estimate gives the total valuation on June 30, 1904, as \$300,000. The net valuation of all school property, real and movable, on June 30, 1919 was \$3,273,704.46. This figure includes buildings, grounds, furniture, and other equipment. It does not take into account the valuation of property condemned and dropped from the official lists.

SCHOOL BUILDINGS.

In forming a just estimate of school expenditures during the past 20 years proportionate to results attained one must bear in mind that the same basis of comparison does not exist as in the case of countries which possess well-organized school systems of long standing. The most conspicuous feature of the schools of the Spanish régime which impressed Americans most unfavorably was the total absence of school buildings and the almost complete lack of proper equipment. In passing judgment on the sums of money expended, one must bear in mind that the public-school buildings and material equipment which exist to-day have been provided during the past 20 years. The schools were conducted, as a rule, in teachers' residences, and in only a few of the larger towns was there any school furniture and equipment worthy of the name. Supervisor William H. Hill, of the San Juan district, in his first report rendered to the president of the insular board of education, made the following statement:

"Furniture and school apparatus were of the most meager description. Not one-fourth of the children have desk accommodation in the majority of the schools, and not more than one-half in the very best. The quantity of textbooks might safely be signified by zero. Two or three Spanish readers, sometimes an arithmetic, grammar, and geography, all much the worse for wear, was generally all that the school could boast. In some instances teachers had to write and compose their own geography and grammar, and, judging from some of the questions I have heard asked, they were certainly not competent to do this."

Supervisor E. E. Riopel of the Ponce district said:

"As to the value of school buildings, those in the rural districts run in value, including lands, from \$200 to \$300. The furniture will not cost, on an average, to exceed \$10."

and then added later on:

"The furniture in the city schools is the same as that in the rural schools."

These two statements describe conditions as they existed in the largest and wealthiest municipalities. As a matter of fact, there was only one publicly owned school building, located in San German, the gift of Doña Antonia Martínez to that municipality, but this edifice was originally a private residence and not erected for school purposes.

The first school building to be constructed in Porto Rico from public funds was a large barnlike frame structure erected on the present site of the Y. M. C. A. building and was destroyed by fire July 1, 1900. Of this building Dr. M. G. Brumbaugh, first commissioner of education, says:

"It was erected by the military government and was known as the 'model and training school.' This building was erected in haste and was not well constructed. It was not conveniently located. It cost much more than it was worth. An officer of the board of public works assured me it could be duplicated for \$5,000."

The first real steps toward securing school buildings were taken in November, 1900, when the President of the United States caused to be transmitted to the treasurer of Porto Rico the sum of \$200,000 to be used for school extension. This money represented part of the funds collected by the Federal Government in the form of custom-house duties on Porto Rican products entering the United States and which were returned to Porto Rico for the construction of schools and roads. Subsequently there were added by the governor of Porto Rico, from the trust funds placed at his disposal by the President, an allotment of \$15,000 for general school extension and one of \$35,000 for the construction of an insular normal school. On April 30, 1902, and upon the recommendation of Commissioner S. M. Lindsay, the governor consented to a further allotment of \$150,000 for school buildings. These funds, aside from the Morrill-Nelson funds for the support of the College of Agriculture and Mechanic Arts, are the only moneys directly allotted by the Federal Government for aiding public education in Porto Rico.

There were constructed from these funds 23 one-room frame buildings located near towns and intended for agricultural rural schools. These buildings were of a type usually found in rural districts in the United States. They were well constructed and all of them are in a good state of preservation and are still in use as rural schools. Two frame buildings of two rooms each were erected in Peñuelas and Juana Díaz and a

two-room brick building in Lares; eight four-room brick buildings in Humacao, Caguas, Coamo, Aguadilla, Manati, Yauco, San German, and Guayama; one six-room brick building at Arecibo; and two 10-room buildings at Mavaguez and Fajardo. These structures were reported at the time as being model school houses in every sense. Whereas they may have been at that time, to-day their construction would not be approved. All buildings of the same number of rooms followed one type without any reference to the peculiarities of the site, the elevation, the facing, the requirements for light and ventilation, and the local surroundings. Only a few years after they were erected it was found that the wooden stairways and balconies on the outside rapidly deteriorated because of the heavy rains and were a constant source of expense for repairs. Since that time some of these buildings have been remodelled and spacious additions have been made thereto. For example, the original four-room building in Caguas now has 16 rooms and the original six-room building in Arecibo now has 22 rooms. A few of these buildings, however, remain in their original form as mute witnesses to the first effective attempts at the construction of public school buildings in Porto Rico.

However, the funds returned by the Federal Government were exhausted in time and it became necessary to devise other means for providing school buildings. In 1907 the legislature passed an act providing a school building fund of \$80,000 subject to increase and replenishment by further appropriations. In 1908 and 1911 respectively further sums of \$40,000 were added. From this fund loans were made to school boards on condition that only half of the total amount borrowed was to be returned to the insular treasury. Much good has been accomplished through the provision of this revolving fund which, at least theoretically, can never be exhausted.

In 1908 the legislature set aside the sum of \$40,000 as a rural school building fund for the purpose of aiding school boards in the construction of rural schools, on condition that the total amount contributed from insular funds for any one building was not to exceed \$250. School boards were authorized to make up the necessary amounts for the school buildings. The total cost of construction of the first agricultural rural schools was \$1,667.67, exclusive of office expense. It is evident from this figure that rural school buildings of the same proportions and lasting qualities could not be erected from the rural school building fund under the conditions stated. As a rule they were much smaller and neither in material nor workmanship could they be compared to the former. Often they were referred to as school shacks and many of them have deteriorated to such an extent as to become unserviceable.

The legislature has made provision from time to time for assisting local boards with funds for the erection of school buildings and in some cases the total amount was furnished from the insular treasury, on condition that school boards provide suitable sites. Many school boards, however, have contracted loans under the laws in force for providing buildings.

The first school board to undertake a building program for supplying the whole city with modern school facilities was that of Ponce. Under the leadership of Mr. F. Manuel Toro, president of the school board of that municipality, a loan in the amount of \$140,000 was contracted in 1913 and a second loan in the amount of \$20,000 in 1914, and buildings were provided for all schools existing at that time. The insular government contributed the sum of \$50,000 toward the erection of a high school which cost \$106,953.11. At the present time, however, the facilities provided then are not sufficient to accommodate the number of schools allotted.

The most ambitious school building program thus far put into operation was launched by the school board of San Juan. Strangely enough, in the capital city, the erection of public school buildings had been long delayed and had even met with active opposition. However, in 1916, the school board of San Juan secured a loan of \$300,000 and embarked upon a plan looking toward the construction of buildings sufficient in number to provide all the children with proper school facilities. The high cost of building material occasioned by the war made the original plan impracticable. The board is now taking steps toward securing an additional loan of \$100,000 for continuing this excellent and very necessary work. Including the value of the site and equipment, the Román Baldorioty de Castro Graded and Technical School erected on San Francisco Plaza exceeds in value the total amount of \$200,000 allotted by the President in November 1900 for school extension in Porto Rico.

The burden of providing school buildings was gradually assumed by school boards with occasional help from insular funds. During the fiscal year 1917-18 \$325,557 were expended for new buildings. This amount is more than twice the sum paid out in 1902, which was a year of special building activity, when \$156,549 were used from funds returned by the Federal Government. This sum of \$325,557 is the largest amount expended in a single year and represented school board funds solely.

On the whole, it may be said truthfully that there has never existed a definite school building policy in Porto Rico. The Federal funds originally allotted were used largely for the construction of buildings in large municipalities, those best able to help themselves, on the ground that these buildings were to serve as models to be imitated in the future through local initiative. Where insular funds had been assigned by the legislature they have often gone to those municipalities that were able to exert the strongest influence in favor of these appropriations rather than to those municipalities that, because of their poverty could not secure loans, or which, because of lack of influence were unable to secure appropriations. The practical results of this lack of a definite policy have been that many of the poorer municipalities such as Corozal, Gurabo, and Luquillo have saddled themselves with loans, whereas wealthier municipalities such as Ponce, Arecibo, Caguas, Mayaguez, Guayama, Fajardo, Yauco, and Humacao were given buildings outright.

It is only fair to state that the early model buildings erected from 1900 to 1903 are now excelled by far in every particular essential to modern school buildings. In the early days people received those buildings without cost to them with joy and gratitude because they had never seen any better ones, and consequently did not possess a standard of comparison. As the years went by they learned, however, that a modern school building should possess many facilities and conveniences in addition to classrooms provided with furniture and blackboard. At the present time buildings are often provided with an office for the principal and in some cases for the school board, with a storeroom for books and supplies, with a library room, with appropriately equipped rooms for carrying on work in home economics and manual training, and in some cases with an assembly room where not only the pupils and teachers, but the public in general, may gather. Needless to say, proper provision is also made for sanitary toilet facilities and lighting for night classes or public meetings held in the evening.

One of the last official acts of the former executive council on the day when it went out of existence, March 2, 1917, was to set aside a credit balance of \$100,000 from the total available balance under act No. 108 of 1913 to be used as a rural-school building fund. Only two buildings have been constructed from this money, which is to be expended during a series of years as cash becomes available.

Although rural buildings, as a rule, are constructed of lumber, a considerable number of consolidated rural schools have been erected of brick or concrete. Juana Díaz was the first municipality which undertook the construction of rural-school buildings, due to the initiative and enthusiasm of Mr. Juan Romeu, who himself drew the plans and supervised the work of constructing very attractive brick buildings for rural schools. The rural-school building which offers the best facilities for instructional purposes is the Federico Degetau Consolidated Rural School, erected by the Arecibo school board, in barrio Santana. It consists of five classrooms, an office for the principal, a storeroom for books and supplies, a kitchen, a storeroom for tools, and facilities for manual training, and has a site of 3 acres of level ground for carrying on work in agriculture. Other examples of modern consolidated rural concrete buildings are the following: Guánica, barrio Cañon; Barceloneta, Palmas Altas and Florida, Afuera; Vieques, Puerto Real.

In 1916 Dr. Santiago Veve, of Fajardo, gave the sum of \$25,000 for the construction of school buildings in Fajardo, Luquillo, and Ceiba. Only one of the proposed buildings was erected, namely, in Luquillo. In Fajardo, Dr. Veve purchased a private residence that is being remodeled for a school. The building in Ceiba is still pending.

One is impressed with the names bestowed on school buildings. In the early days American statesmen and generals with an occasional literary or educational hero were the personages most favored in the selection of names for schools. In later years the regional spirit asserted itself to contribute its quota of heroes to be immortalized. The Washingtons, Lincolns, Grants, Whittiers, and Manns of the continent are now compelled to share honors with the Muñoz Riveras, José Julian Acostas, Rufz Gandías, José G. Padillas, and Pedro Goicos of Porto Rico. Occasionally one finds the name of a local dignitary, and in a few communities the names of former commissioners or supervisors are to be found. Now and then the humble hero is honored, as for example, in Naguabo where Mr. Juan Garzot gave a site for a 10-room graded school on condition that the building should bear the name of the teacher of his boyhood, Eugenio Brac.

At the present time there are in Porto Rico 152 publicly owned school buildings in urban centers, with 942 different classrooms; and 377 publicly owned rural-school buildings with 452 classrooms. Last year 184 buildings with 433 classrooms were rented in urban centers and 1,011 rural buildings with 1,096 classrooms in the rural zone. One of the greatest present needs of Porto Rico is the construction of rural-school buildings, which should be of the consolidated type wherever possible.

No school buildings of any kind have been erected in the urban zones of Ceiba, Juncos, Hormigueros, Jayuya, Barceloneta, Morovis, Dorado, and Guainabo, and in the rural districts of Loiza, Fajardo, Luquillo, Hormigueros, and Rincón.

For a detailed statement of publicly owned and rented school buildings see Table IV and the subjoined summary:

SCHOOL BUILDINGS.

I.—Total number of buildings.

	Public property.	Rented.	Total.
Used for urban schools.....	152	184	336
Used for rural schools.....	377	1,011	1,388
Total.....	529	1,195	1,724

II.—Public property.

Number of buildings having—	Urban.	Rural.	Total.
1 room.....	19	320	329
2 rooms.....	23	52	75
3 rooms.....	2	1	3
4 rooms.....	29	3	32
5 rooms.....	8	1	9
6 rooms.....	21		21
7 rooms.....	3		3
8 rooms.....	17		17
9 rooms.....	1		1
10 rooms.....	3		3
11 rooms.....	1		1
12 rooms.....	8		8
13 rooms.....	2		2
14 rooms.....	1		1
15 rooms.....	1		1
16 rooms.....	7		7
17 rooms.....			
18 rooms.....	2		2
19 rooms.....			
20 rooms.....	2		2
21 rooms.....	1		1
22 rooms.....	1		1
Total.....	152	377	529

III.—Total number of schoolrooms.

	Public property.	Rented.	Total.
In buildings used for urban schools.....	942	433	1,375
In buildings used for rural schools.....	452	1,096	1,548
Total.....	1,394	1,529	2,923

BUILDING SITES.

From the outset great obstacles were encountered in the matter of securing proper school building sites. The first commissioner, Dr. Brumbaugh, complains of this difficulty, with which the authorities have been compelled to struggle ever since Porto Rico, being an island with a dense population, the available amount of land can not be increased by the opening of new lands. Land values have risen rapidly and steadily during the past 20 years. Many lands that were available at \$20 per acre in 1899 can not be bought for \$300 per acre at the present time. Oftentimes owners are unwilling to sell, and thus far there is no case on record where any school board has successfully exercised the right of eminent domain for securing a school site. Then again it has often been impossible to secure building sites with a clear

title, and often where efforts have been made to clear up these titles years have passed without any definite result. Some five years ago the legislature appropriated money for the erection of a school building in Morovis, but more than four years elapsed before a site with a clear title was made available. When it comes to securing sites in the country with good titles, the difficulties are sometimes insurmountable. In the municipality of Rincon after 20 years of effort the authorities have been able to secure one building site with a clear title in the rural zone, although both school boards and supervisors have made determined efforts in this direction.

On the other hand, very desirable sites have been acquired at no expense to the public purse through donations made by public-spirited persons who were anxious to assist in promoting the cause of education. These sites range in extent from 1 to 3 cuerdas. During the past four years 58 sites have been donated, 9 by municipalities, 7 by corporations, and 42 by individuals.

In the early days people were content with sites sufficient in dimension to accommodate the school building, with but little or no space for playgrounds. It has been hard to develop the conception in the popular mind that a school needs much more land than the space upon which it stands, that children require ample room to play, and that as a rule there should be sufficient space for carrying on school garden work. In recent years more success has been attained in this respect, and the department has insisted that no less than 1 cuerda of land should be accepted for a rural school building site. There are cases, nevertheless, where this requirement can not be met. School boards have been urged to secure sites wherever possible without any reference to the immediate construction of buildings. Had this policy been initiated 20 years ago much would have been accomplished toward the erection of future school buildings which are often delayed because of the lack of available land.

In certain cases most admirable results have been attained in the matter of securing sites for future buildings. The school board of Guayama has provided 8½ cuerdas for the site of the proposed high school; Juncos has a site of 6 cuerdas for the proposed graded school; Gurabo provided 4 acres for an eight-room building; Luquillo secured a site of 1½ cuerdas right on the seashore; and Lares, though located in the mountains, was fortunate in securing a site of 4,000 square meters of level land for a graded school building to be erected in the future. These cases are cited as examples of the policy that has been in vogue in recent years.

EQUIPMENT.

Of modern equipment practically none existed when the change of sovereignty occurred. Now all publicly owned buildings and many rented buildings are equipped with modern furniture. The antiquated type of benches can only be found in remote rural schools, of which there are about 400 at the present time without modern equipment. Whenever additional schools are established the department has insisted that before these schools are opened they must be supplied by school boards with modern furniture and other equipment.

THE WORK OF THE SCHOOLS—RETROSPECT.

In presenting a comparative study of the progress made by the present school system during the past 20 years, it is necessary that the reader should understand conditions as they existed when the change of sovereignty occurred. Progress can best be judged by having a thorough and intimate knowledge of facts and conditions as they were at the point of departure. The writer, although he saw the schools and their work at the close of the former régime, first as supervising English teacher and later as supervisor of schools, can not improve upon the clear and vivid description given by Mr. Enrique Landrón, principal of one of the graded schools of San Juan during the school year 1901-02 and now a prosperous sugar grower. A letter by him addressed to Dr. S. M. Lindsay, commissioner of education, which was published in the annual report for the school year 1901-02, is again quoted in part for public information:

"All the public schools in Porto Rico under the Spanish Government were divided into four classes—rurals, auxiliaries, elementary, and superiors. Teachers holding rural certificates were generally in charge of rural schools, and teachers holding auxiliary, elementary, and superior certificates were in charge of auxiliary, elementary, and superior schools, respectively. In the auxiliary and rural schools the following subjects were taught: Reading, writing, elements of arithmetic, catechism, and the merest elements of Spanish grammar. These subjects and an elementary outline of Spanish history, agriculture, industry and commerce, sacred history, and elements of geography were taught in the elementary schools, while the superior teachers had to teach all these subjects more extensively and also some elements of geometry, surveying, lineal drawing, physics, and natural history.

"In the course of study the teacher was permitted to introduce such changes as he deemed necessary for the interests of the school. There was no grading of the schools. Every teacher classified his pupils according to his own ideas, although generally the pupils in the schools were divided into four classes, which were called "primera, segunda, tercera, y cuarta clase," the first one being the most advanced. Generally the pupils in the first and second classes only were taught by the teacher himself, the other classes being in charge of the most advanced pupils, who acted as assistants to the teacher.

"As to the method of teaching, the pupil had to learn by heart the lessons in the textbooks. These textbooks were written in the old way of questions and answers. The pupil had to learn daily a certain number of questions. At the time of the recitation the teacher would read out the questions to the pupil, who in turn would answer the same *ad pedem literae*. The pupils had to learn their lessons at home. A few minutes were granted them before the recitation to read over the answers they had to recite that day. The highest mark was given to the pupil who recited the lesson without omitting any of the words. Besides these recitations the teachers were supposed to give some oral explanation in grammar, arithmetic, and catechism. Object lessons were entirely unknown.

"As to discipline, if there was any, it was very bad. An unbearable noise was heard continuously in the school. Corporal punishment, abnormal positions, and retention after school were the most common punishments used.

* * * * *

"The salaries of the teachers were as follows: Rural teachers, \$300 per year; auxiliary teachers, \$360 per year; teachers in second-class elementary schools, \$540 in San Juan, Ponce, and Mayaguez, and \$480 in other towns; teachers in first-class elementary schools, \$720 in San Juan, Ponce, and Mayaguez, and \$600 in other towns; superior teachers, from \$1,200 to \$1,000 per year. In the small towns, as Vega Alta, for instance, the school was called a second-class school, and in the large towns, like Bayamon, a first-class school. The teacher in charge of the superior school of San Juan had a salary of \$100 per month, while the teacher of Arecibo had only \$80 per month. The ayuntamientos were supposed to pay the rent of the schoolhouses and the salaries of teachers. They also were to provide all materials for the schools. The teacher and his family generally lived in the schoolhouse. The school was free only for poor children. Other pupils had to pay a monthly fee to the teacher. In the larger towns the public schools were usually attended only by the poor children; the others attended private schools.

"One of the duties of the school board was to supervise the schools. Of the members of the board the alcalde and the parish priest were the only ones who visited the schools, and at the end of the school year a committee of the board presided at the general examination. For the purpose of supervising the schools of the island, the island was divided into two districts—the northern district and the southern district—and one supervisor was appointed for each district. They had to visit the schools of their respective districts once a year and report on their condition to the comision provincial."

Added to the above statement, the following quotations are offered as to school conditions during the Spanish régime and during the first year after the change of sovereignty, Victor S. Clark, president of the insular board of education, in a discussion of primary education, presented in his first annual report, said:

"Methods of instruction were antiquated. A large portion of the time in girls' schools was devoted to ornamental needlework, to the injury of both their eyes and their general health, and catechism and church doctrine were taught in nearly all schools. The methods of instruction in other branches were based upon those used in these latter subjects—that is, set answers to questions were memorized by the pupils. Many schools were taught almost entirely by pupil teachers, who were not certificated or examined or in anyway under government control."

Dr. Brumbaugh, first commissioner of education, in his second annual report makes the following statement of pupils' work:

"First of all one is impressed with the fact that age is not at present a basis of graduation. Pupils 6 years of age are as well advanced as some at 14. This proves that many thousands are now for the first time engaging in study. They never saw a school until this year. The progress of these older pupils is very commendable. They work well. They are anxious to recover lost time. They are tractable and earnest. They have more endurance than the younger ones, but they also have greater limitations. It proves that almost 65 per cent of the school effort is primary work.

"In general, the pupils do best in the imitative activities. They do least in the reasoned activities. The penmanship is unquestionably better than that found in the American schools. The children sing as well as those in the best American schools. They read well and with much expression. * * *

"Drawing is readily taken up and exceptionally good results are obtained. In all these particulars the schools are admirable.

"In arithmetic and grammar the work is not so good. In the descriptive and narrative studies they do fairly well, and especially is the work good in the history of the United States.

"The children are noisy in study. Under the old Spanish conditions the pupils studied aloud. Where the old teachers have come into the new system much trouble arises in the determination of the supervisors to change this. Gradually the noise of study is lessening. Before another year this offense will be corrected. The children are excitable and easily prevented from studious habits. It is difficult to maintain study hours in the schools. The temperament of the pupils does not lend itself easily to studious habits." * * *

Dr. S. M. Lindsay, second commissioner of education, presents the following estimate of the school work performed in the previous régime:

"The work done under the Spanish school system scarcely constituted anything worthy of being called a school. There was no uniform course of study, no attempt at rules, regulations, or order; no thought of the rights of the child; no endeavor to apply pedagogical principles nor to furnish teachers with an adequate equipment for their work. A rural teacher lived with his family in the schoolhouse and did as he pleased with his pupils, frequently not teaching them at all himself, but hiring a substitute or delegating one of the elder and brighter pupils to teach under his general instruction, while he drew his salary and sometimes absented himself from school for considerable periods. There were but two schools supervisors for the entire island and they made but one visit a year to each school, chiefly for the purpose of examining the pupils in the catechism and doctrine of the Roman Catholic Church."

PRESENT DAY ASPECTS.

In contrast to the ungraded one-teacher school, with an occasional assistant, that was in vogue in cities as well as in the rural districts of Porto Rico during the Spanish régime, there has been established a school system founded on American principles and based on American models. Visitors from the continent often express surprise that our schools should have the same organization, follow similar courses of study, and even enjoy the advantages of modern equipment, as those to be found in the States. There are rare though marked differences as, for instance, the physical characteristics of teachers and pupils and the bilingual system of instruction. Frequently favorable comments are made by visitors on the general neatness and cleanliness of dress shown by the children, evidences of brightness, willingness to learn, and their courtesy of manner.

The course of study for the urban system extends over a period of eight years and covers all the branches usually given in a well-organized, modern school system, with this difference—both Spanish and English are taught. In the first two grades emphasis is placed on Spanish reading and writing, whereas English is taught orally. In the four lower grades Spanish is the medium of instruction. The transition from Spanish to English as the medium of instruction is made in the fifth and sixth, and in the grammar grades English is the language of instruction and Spanish is taught as a special subject. The course of study for rural schools usually extends over a period of four years, except in consolidated schools, where six years of work are offered.

TEACHING OF ENGLISH.

The first American teachers appointed for service in Porto Rico were assigned to teach pupils entering school and were called kindergarten teachers. Few, if any, knew anything about the kindergarten or kindergarten methods. The authorities, as well as the public, realized that the introduction of the English language was of vital importance. There has been at no time a tendency to suppress Spanish. There are no reasons why this should be done. Because of the geographical location of Porto Rico, the ancestry and traditions of the people, and from a commercial standpoint, there is every reason for continuing the study of Spanish. From the earliest days the purpose of the department has been to establish and develop a bilingual system of education which would insure the conservation of Spanish and promote the acquisition of English. Both of these languages should be mastered sufficiently for practical use. The people of Porto Rico fully realize the importance of having their children

learn English, and correct English. The following is quoted from a statement made by Mr. José Padín, former assistant commissioner of education, giving his views upon this very vital question:

"Although this language question has been discussed with considerable animosity, the wisdom of teaching English in the public schools has never been seriously challenged by the people of Porto Rico. They are as keenly alive to their linguistic opportunity as the school authorities have ever been. A great many people question the advisability of teaching subjects other than the English language in English and argue that this tends to retard the progress of the pupils and to destroy the purity of the Spanish language—the thin, entering wedge which must eventually destroy the mother tongue of the people of Porto Rico and with it their individuality. Personally, the author believes that no matter what the ultimate status of Porto Rico may be (and he grants that the ultimate status of Porto Rico and its language question are intimately related), this island will remain an intellectual and spiritual as well as an economic dependency of the United States. Our youth will continue to go north for advanced academic and technical training. Our merchants and professional men will keep in close touch with the North American development of business and science. The steamers that will continue to ply between our ports and the northern coasts will feed the current which has had already a tremendous influence on our life. There is no escape from this transforming influence. Our insular life is not self-sufficient. The stimulus and the inspiration for continuous growth must come from without. They will come from the United States. And because North American ideals are destined to exercise such a powerful influence on our life it is desirable that we make the closest acquaintance with those ideals. The majority of the people of Porto Rico can not familiarize themselves with North American ideals at first hand, that is, by actually living in the United States; consequently they must do so through the next best means, through the English language. A superficial knowledge of the English language is not enough. For cultural purposes in the ordinary sense, a reading knowledge of a language may be sufficient. To catch the spirit that animates the life of a people, to know and absorb their ideals, it is indispensable to master their language, to possess it wholly. Therefore, in attempting to give the children of Porto Rico as complete a mastery of the English language as it is feasible to give through the medium of a school education, the department has acted with the fullest realization of the educational interests of the people."

Various means have been tried for teaching English effectively. The early kindergarten method was soon abandoned. Porto Rican teachers were placed in charge of the grades and taught all the subjects of the curriculum in Spanish. English was taught as a special subject by American teachers. The school laws provide that at least one teacher of English must be assigned to every village and city maintaining a graded system of schools. With the rapid extension of the graded schools it was soon found that the number of teachers of English available in the budget was not sufficient to give special instruction in English to all children in the system. It also became evident that the teaching of English as a special subject was not producing results as rapidly as had been expected. Pupils did not receive a sufficient amount of ear and verbal training during the brief period that the teacher of English was in charge of the class to enable them to master the language for practical use. English was used only in the class for English, and Spanish was the language of the child not only at home, on the street, and on the playground, but also while studying the other school subjects.

Every possible opportunity and inducement were offered to Porto Rican teachers to learn English and to prepare themselves to give all instruction in this language. Beginning with the year 1904-5 experiments were made in San Juan, Ponce, Arecibo, and Coamo to place all instruction, except in the Spanish language, on an English basis in charge of Porto Rican teachers. The results were reported to be little less than marvelous. Pupils learned more real English in one term than they had formerly during a full year. Later experience has proved, however, that the degree of preparation of Porto Rican teachers for all municipalities was not the same as it had been in those few towns. Naturally the department was eager to have all graded schools placed on an all-English basis. Authorization to Porto Rican teachers to teach in English was granted on passing a practical examination conducted by a committee of supervisors. Later results have shown, however, that the department overreached itself and that this authorization was granted to many whose knowledge of English was not only far from perfect but even unserviceable outside of the limited confines of the classroom. In other words, many teachers had not mastered the English language sufficiently for practical use. The pronunciation of pupils was defective, because they did not have correct models to imitate. Though they mastered the rules of grammar, the composition work showed that much of the English

was merely translated Spanish. Pupils did not acquire the habit of thinking in English, and consequently did not gain the necessary facility in expressing themselves in this language. On the other hand, the proportion of those instructing in English to the total number of teachers was not maintained in the allotments provided by the legislatures. In recent years, because of low salaries, the department has not been able to secure persons enough from the States to fill even the limited number of positions provided, and many of them have been occupied by Porto Ricans who have shown special qualifications. At the close of last year there were only 53 continental American teachers of English in the service. The number of teachers from the States in the high, continuation, and elementary schools was less than 4 per cent of the total. Instructors of English have been assigned to the grammar grades, where the work is conducted on the departmental plan, but the number has been far from sufficient to provide all the schools, so that many pupils have completed the elementary school course without having had the benefit of ear training in English from a native American.

It is fair to say in all frankness that the schools have not made the progress in English that had been expected. A discussion of method and procedure is quite futile. This is primarily a question of teachers who possess a thorough knowledge of English. Whatever future policy the department may adopt with reference to the furthering of a knowledge of English, it is very evident that there must be a liberal increase in the number of competent teachers.

SPANISH.

The teaching of Spanish, which is the mother tongue of the children, has not been neglected and has received a decided impulse during recent years. Whereas occasionally fear is expressed that the beautiful Castilian tongue is in danger of being suppressed and that the language of the people is becoming corrupted, the truth is that Spanish is being better taught to-day than at any other period in Porto Rico's history. The proportion of poets and orators may not be as large as in the former régime, but the public schools do not aim to produce rhetoricians. They do teach the practical use of the language for practical purposes, together with such a study of literature as is justified by the extent of the course.

OTHER SUBJECTS.

The progress made by pupils in the other academic subjects, geography, physiology and hygiene, penmanship, history, and civics may be said to be very creditable indeed. The handwriting of pupils continues to be better than that of children of like grade in the United States. In arithmetic the work is not so good. On the whole, teachers have succeeded admirably well in adapting themselves to the modern methods of instruction. The discipline of the schools presents a marked contrast to that prevailing 20 years ago, when all pupils studied aloud, if they studied at all. The positive results secured by the present school system are sufficiently well attested by the hundreds of young men and women who have gone to the United States and have readily secured remunerative employment, largely because they possessed a knowledge of English.

SPECIAL TYPES OF SCHOOLS AND INSTRUCTION.

Industrial schools.—The first type of special school attempted in Porto Rico was the so-called industrial school established in San Juan in 1903 and which was followed later by others organized in Ponce, Mayaguez, and Arecibo, appropriations being made for their support during the five-year period from 1903-1907. On the whole, the work of these schools was not as successful as had been at first expected. It was not possible for the department to secure specially trained teachers to take charge of the instruction. The course of study included work which was largely of an academic rather than of a technical character, and both pupils and the public did not fully appreciate and understand the meaning of industrial education at that time because they were too eager to measure results by the ability of pupils to earn money after a brief period of training.

Continuation schools.—Commissioner E. M. Bainter was a specialist in vocational and prevocational work. He gave the first real impetus to manual training, home economics, and agriculture as subjects in the regular school curriculum. Due to his efforts there were established so-called continuation schools in more than half of the municipalities in Porto Rico. A continuation school is a nascent high school covering either the work of the ninth grade or of both the ninth and tenth grades.

Home economics and manual training were taught throughout the seventh, eighth, ninth, and tenth grades, and also in the first and second years of all high schools. The success of this work was varied. At first it met with opposition in certain localities, but through the persistent efforts of Mr. Bainter, the cooperation of school boards was secured, and they provided the necessary shops, kitchens, and sewing rooms, together with the equipment to carry on this work. It is no longer considered a disgrace for any boy or girl of the wealthier families to take work in these subjects. They take considerable pride in their accomplishments. Owing to the fact that a sufficient number of ninth and tenth grade pupils have not always been available in the smaller towns, the work has been discontinued in some of them. The department has also encountered considerable difficulty in securing properly trained teachers at the salaries offered, and consequently the work could not be continued in certain municipalities. Home economics and manual training are both firmly established in the school system and are valuable educational factors in the training of the boys and girls. The department is planning to extend the work to grades below the seventh wherever possible to do so, and instruction in these subjects has been successfully given in a number of rural schools.

The girls and women of Porto Rico possess a particular aptitude for needlework, which constituted a regular subject in all schools for girls under the Spanish régime. Unfortunately the value of this work was not appreciated by the American authorities when the present system was established and it was eliminated from the course of study on the ground that it was injurious to the eyesight and general health of the girls. The schools could have rendered valuable material assistance to the girls in preparing them for gaining an independent livelihood had needlework been continued standardized, and placed on a commercial basis. Only in recent years have the authorities realized that much valuable time has been lost and a positive harm done by eliminating this instruction from the course of study.

The legislature has made provision in the budget for next year for 20 teachers of embroidery and drawnwork, and a determined effort will be made to introduce this work anew on a sound basis, not only as a means of education, but also and more particularly to enable girls to become self-supporting by doing work in the home, because relatively few of them can become school teachers, telephone operators, clerks, and tobacco workers. D. E. Sicher & Co. of New York have established schools for this kind of work in Ponce, Mayaguez, and Caguas and have demonstrated its success. The work of this firm is another illustration of the manner in which private initiative assists and encourages public authorities in introducing and organizing the supplementary features and agencies of education.

Agriculture.—One of the most necessary and useful subjects of school instruction to aid the masses in improving their own economic condition is the teaching of agriculture. Formal instruction in this subject was made obligatory beginning with the school year 1913-14 for all boys enrolled in the sixth, seventh, and eighth grades in the urban schools and for all boys in the rural schools who were physically able to do the work. A special teacher of agriculture was provided for each one of the districts, but with the retrenchment in expenditures made necessary, beginning with the fiscal year 1914-15, they were eliminated from the budget. The year following 10 teachers of this class were employed, who worked in cooperation with the special agents of the food commission. Practical work in agriculture was carried on in every school that had any land available for demonstration plots. Girls as well as boys were taught how to cultivate home gardens, and many women were fully as successful in teaching gardening as were the men. The best evidence of the success of the work in agriculture is the fact that during the school year 1918-19 there were cultivated in Porto Rico 64,548 home gardens, which were promoted directly through the efforts of the schools.

Music and drawing.—Both music and drawing form a part of the regular common-school curriculum, though many of the teachers have not enjoyed any special training in these subjects. The success attained varies a great deal, depending upon their preparation and ability and the interest of the supervisor. The work in these subjects had the benefit of expert direction during the school years 1913-1915, but the special supervisors of these subjects were eliminated from the insular budget on the ground of necessary economies.

Physical training and playground work.—Physical training and playground work were introduced in 1908 and for a time a special supervisor was employed. This position was eliminated from the budget through legislative economy in 1914, and since that time the work in physical education has been carried on by the regular teachers, who follow the course of study prepared by the former supervisor.

The commissioner of education has urgently and persistently recommended that the positions of special supervisors of music, drawing, and physical education should be restored, but thus far his efforts in this direction have been unavailing.

Night schools.—Night schools have been of inestimable value in reducing the percentage of illiteracy among adults who have not enjoyed the opportunities of an elementary education in their childhood. The instruction in these schools has been limited to illiterates over 15 years of age. In recent years the appropriations for this purpose have been inadequate indeed—only \$5,000 per annum—and consequently the total enrollment has been comparatively small. Many night schools have been maintained in rural barrios without extra compensation to teachers. During the school year 1916-17, 120 rural night schools were conducted by teachers without any public expense.

HIGHER AND PROFESSIONAL EDUCATION.

When the change of sovereignty occurred no institution of higher learning existed in Porto Rico. There were, however, a normal school for young ladies, a normal school for young men, and an institution known as the "Instituto de Segunda Enseñanza," which constituted Porto Rico's highest center of learning. Only the latter was installed in a building of its own. After an investigation of their organization, courses of study, methods of instruction, and character of work done, these institutions were definitely closed. The need for establishing a normal school for the training of teachers was urgent indeed, and the insular board of education on November 27, 1899, authorized the normal-school committee to purchase a site for the Fajardo Normal and Industrial School and appropriated a sum not to exceed \$15,000 for buildings and laboratories. Classes for the training of teachers were organized in rented buildings in Fajardo and conducted for several months. No industrial department was established. Dr. Brumbaugh, first commissioner of education, saw fit to transfer the normal school to Rio Piedras, where it would be more accessible to students from the whole island. The standards for admission and graduation were necessarily low at first.

The Legislature of Porto Rico on May 12, 1903, passed the university act and transferred the normal-school property to the board of trustees of the university. An additional tract of land of nearly 100 acres was purchased and an agricultural department was organized in 1904. The first group of students had not completed the elementary course, and all of them were granted scholarships. So little did the people understand and appreciate the value of practical and technical training that not a single student matriculated to take the course in agriculture at his own expense. Even in the normal school students were eager to receive a certificate in the shortest time possible in order to enable them to get out and earn a livelihood. Happily for the university, the conditions of those days have passed and are forgotten by the public.

At the beginning of the academic year 1911-12 the agricultural department at Rio Piedras was definitely closed and the College of Agriculture and Mechanic Arts was established at Mayaguez, but continues to be one of the most important colleges of the university. At the present time the college maintains courses in agriculture and the various branches of engineering, which are fully on a par with those of the land-grant colleges on the continent.

The third division, the College of Liberal Arts, was established in April, 1910, and was opened the following September. In September, 1913, work began in the College of Law and the College of Pharmacy, both at Rio Piedras.

Up to the present time no other collegiate or professional departments have been established on account of lack of funds in the insular budget to maintain them. Thus there now exist the following collegiate divisions: The normal school with its elementary practice school of eight grades, the College of Agriculture and Mechanic Arts at Mayaguez, the College of Liberal Arts, the College of Law, and the College of Pharmacy.

The university maintains at Rio Piedras a high school which serves as a preparatory school and as a secondary practice school for candidates for the degree of bachelor of arts in education. At Mayaguez there exists a subcollegiate department which prepares especially for the technical courses given in the College of Agriculture and Mechanic Arts. A diploma in agriculture or polytechnic science is granted upon completion of the subcollegiate course.

Since the university was organized as an extension of the public-school system its courses of study have always been closely articulated with those of the public schools. Thus students may enter from the public high schools directly into any college of the university without examination.

In response to a demand for teachers, the normal school at first received students upon completion of the sixth grade and offered only a three-year course. The requirements were gradually raised until two years of high-school work were demanded for admission and the course covered a period of four years, the diploma thus following six years of work beyond the eighth grade. By a recent change, following an extended trial, the course was reduced to two years and high school graduation was

required for admission. No reduction in standards was made, but the normal course became distinctly professional. In addition to the full normal course an elementary course has always been offered. At first this prepared for teaching in urban graded schools, but since September, 1917, it has been converted into a special course for the preparation of rural teachers.

The University of Porto Rico is still in its infancy. It does not yet measure up to the standard of the great universities on the continent. It is not prepared nor equipped to do research work, characteristic of a true university. It is rather a teaching institution, and as such its work is steadily improving and is very creditable indeed. In recent years the board of trustees has added a number of scholarly men to the instructional force, but the salaries paid are not such as to hold men of their qualifications for a long period.

The income of the university is derived from various sources. Beginning with the year 1907-8 the Government of the United States extended to Porto Rico the benefits of the Morrill-Nelson fund for the maintenance of the College of Agriculture and Mechanic Arts, and since 1911-12 this institution has enjoyed the benefits of the sum of \$50,000 annually from this fund. Fifty per cent of all fines imposed by the courts of Porto Rico and which are paid into the insular treasury are allotted to the support of the university, and royalties from franchises or public rights are also specified in the university act, but the income from these two sources, as well as the 25 per cent of the proceeds from the sales of all public lands, has been relatively small. Tuition fees are charged only in the law and pharmacy departments and in the university high school, and a limited matriculation fee in the liberal arts department. The balance of the funds necessary for the support of the university are made up by legislative appropriations, which have been modest indeed, to say the least. In fact, the appropriation made for 1917-18 was less than the sum received from the Federal Government on account of the Morrill-Nelson fund. The growth of the university will depend upon its resources, and resources will be furnished only in proportion to public appreciation and demand for the higher and professional training which the university offers. Much of the work done by the university has been and still is of a secondary character, as is apparent from the following:

Summary of degrees, diplomas, and certificates granted since the university was first organized.

RIO PIEDRAS DEPARTMENTS.

Elementary normal certificates.....	966
Rural teachers' certificates.....	122
Normal-school diplomas.....	377
Bachelor of arts.....	4
Bachelor of science.....	5
Bachelor of laws.....	57
Pharmaceutical chemist.....	41
High-school diplomas.....	175
Total.....	1,747

COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

Bachelor of science in agriculture.....	24
Bachelor of science in civil engineering.....	5
Bachelor of science in mechanic engineering.....	3
Bachelor of science in sugar chemistry.....	8
Subcollegiate diploma in agricultural science.....	26
Subcollegiate diploma in polytechnic science.....	50
Total.....	116
Grand total.....	1,863

TEXTBOOKS AND SCHOOL SUPPLIES.

At the close of the school year 1898-99 all textbooks in use in the public schools were gathered up in order that they might be replaced by books of a modern type. These old textbooks could not be considered modern in any sense. Some had been out of date for at least a generation. They were insufficient in number to supply the children in attendance and the majority of them dealt with religious instruction.

It was not possible for the insular board of education to secure at once books that were properly adapted to the requirements of Porto Rico. In fact, when schools were opened in September, 1899, many of them were not supplied with books for two or three months.

The first American textbook to be introduced in Porto Rico was Appleton's First Reader, which was even used in English classes for teachers. American publishers

made hasty efforts to supply the new market to be found in Porto Rico and as a result English books were hurriedly translated into Spanish with the consequent deficiencies in the matter of language. For several years no definite attempt was made to produce textbooks especially adapted to the needs and interests of Porto Rican children. Then followed a brief period when books prepared especially for the Philippines were introduced, some of which are still in use. One of the reasons why no distinctive Porto Rican textbooks were produced is because under existing laws authors can not receive royalties and consequently there was no encouragement for persons in the educational service to do this kind of work. The first genuinely Porto Rican books produced were the readers prepared by Dr. Manuel Fernández Juncos and a History of Porto Rico by Mr. Salvador Brau, one of Porto Rico's foremost writers. "Moral Social," by Eugenio María de Hostos, one of Porto Rico's most famous educators of the Spanish régime, was also adopted. In 1906 the first attempt was made to produce English readers adapted to the environment of Porto Rico and Porto Rican children. Miss Grace Mowry, primary critic teacher in the practice school connected with the insular normal school, prepared the Spanish-American Primer, which was followed shortly after by the Spanish-American First and Second Readers, prepared by the writer of this report. Mr. Enrique Hernández, secretary of the department and later supervisor of Spanish, prepared an elementary grammar first published in 1903, which is still in use but which is being replaced at the present time in view of the changes that have taken place in the conception and teaching of language and grammar as school subjects. Dr. E. N. Clopper, principal of the Central High School, San Jaun, prepared a condensed text entitled "Facts of Porto Rican History," and the writer prepared a brief manual of the civil government of Porto Rico.

Four years ago a new impetus was given to the preparation of textbooks especially adapted to the needs, interests, and environment of the Porto Rican child as well as to the bilingual system of instruction in vogue in the schools. The reorganization of the work in the lower grades was made simultaneously with the adoption of new books, the context of which had been tried out in the classrooms either in the form of mimeographed lessons or departmental bulletins. Mr. José González Ginorio, general superintendent of Spanish, first prepared a teachers' manual to accompany his "Método racional para la enseñanza de la lectura y escritura simultáneamente en el primer grado." This manual was followed by "Lectura Infantil" Libro Primero and Libro Segundo with exercises for drill in oral language. "El buen castellano" by Mr. Manuel G. Nin, supervisor of Arecibo district, was tested in the third grade last year in bulletin form. "Gramática Castellana" by Mr. Felipe Janer has been adopted for work in the eighth and ninth grades.

With the change in English to oral work in the first and second grades came "First Grade Oral English" and "Second Grade Oral English," both prepared by Mr. Joseph C. Morin, general superintendent, whose "Phonetic Reading" for the third grade is now in press.

Dr. Bailey K. Ashford, than whom there is no better living authority on tropical diseases and hygiene, contributed highly valuable material to "Higiene Práctica," a textbook used in the intermediate grades.

"Home Making and Home Keeping" by Grace J. Ferguson, supervisor of home economics, is probably the only home economics textbook in English dealing with tropical conditions.

One of the most important changes introduced recently is in arithmetic. Miss Laura M. Seale, instructor in mathematics and supervisor of arithmetic, University of Porto Rico, has rendered the department valuable service in the preparation of a series of texts consisting of a "Manual of Arithmetic" for teachers, to be used in connection with the first and second grades, a "Primary Arithmetic" for the third and fourth grades, and an "Intermediate Arithmetic" for the fifth and sixth grades. All irrelevant and useless subjects have been eliminated. The systems of weights and measures legally adopted in Porto Rico only are introduced in the exercises. The problems are taken from practical life relations and deal with the industries and commerce of Porto Rico.

Miss Susan D. Huntington prepared two bulletins on "Moral and Civic Training" for the use of teachers. The department is still in need of a text on Porto Rican history and geography adapted to the fourth and fifth grades.

Because of limited funds the public schools have not been furnished with a high quality of school supplies. In recent years particularly the department has been prevented from getting supplies of superior quality because of the very marked increase in prices. It may be safely said that at no time during the past 20 years have the schools enjoyed the benefit of first-class supplies in amount sufficient nor have the textbooks been always available to supply all pupils. An examination of the expense per pupil for textbooks and supplies will show that the per capita cost has been exceedingly modest indeed. During the past year this cost per pupil was only 52 cents.

THE TEACHING PERSONNEL.

The present body of teachers presents a marked contrast to the teaching force employed during the last year of the Spanish régime. The rapid extension of the school system after the change of sovereignty made necessary the certification of many persons, mostly young men and women who possessed greater zeal and ambition than learning. Of professional training they had little or none. Their academic preparation in many cases did not extend beyond the work of the fifth or sixth grades. Consequently the examinations were made relatively easy after the first one, in which only three candidates were successful. During the early years much disparaging criticism was heaped upon the department and these untrained teachers by some of those who had acquired their títulos during the previous régime. An examination of trustworthy testimony, however, goes to show that on the whole these new fledglings in the teaching profession were as well, if not better, prepared than the mass of teachers in the service prior to the year 1899.

Don José Bobadilla, one of the two Spanish Government inspectors of schools, makes the following comment on the teaching force employed during his time:

"As to teachers, no specified scholastic requirements were enforced. What was the certificate of qualification necessary to teach in schools of the lowest class? A simple statement of fitness and good character issued by the local junta and approved by the governor general. He who could simply read, write, and teach the catechism satisfied the legal requirements of a teacher. It is true that some of the juntas in principal towns, whose membership included the superior teacher, demanded a strict fulfillment of the requirement that applicants for teachers' positions be examined. Most of the other school boards, however, dispensed with this entirely."

Don Alejandro Infíesta gives expression to the following opinion:

"I can not view without alarm the utter neglect nor without severe censure the absolute incompetency of those intrusted with the care of the young, mere ciphers incapable of instructing the generation that is rising, and for this reason I feel it my duty to call the attention of the Government to these conditions, for this generation represents the future of the country."

The above comments refer to the period just before the decree of 1880. Later testimony, however, showed that little improvement had been made during the succeeding 18 years.

Says Mr. Enrique Hernández, for many years secretary of the department of education:

"If we consider the teaching force, we find as a rule that certificates and appointments were given for political rather than for professional qualifications. In an examination the recommendation of an influential patron held more weight than the merits of an examinee. People fancied that these abuses would be corrected when the normal schools were established in 1891, but in a short time these, too, were discredited, and as the number of pupils who entered them was very limited the examination requirements became more lax and recommendations came to have more and more influence with the teachers. We do not wish to be understood as saying that all the school-teachers were worthless. There were many, as there are at the present time, with real ability and true devotion to their work. But the greater number of them were exactly the reverse."

Of course, this lack of preparation and efficiency was not characteristic of all teachers. There were noble and devoted spirits who unselfishly rendered their country good service in spite of obstacles, lack of encouragement, and proper remuneration.

The teachers of that time should not be blamed entirely for their shortcomings. Says Mr. José Francisco Díaz, a teacher and inspector, in a report to Gen. Eaton made January 28, 1899:

"We have here, as a rule good men and women teachers. If there are occasions where they fail to fulfill their duty, this is caused by the neglect and disregard which they have suffered. They were not paid, they were not respected or encouraged in their work. They were not provided with means of instruction. Most of them occupied mere huts in place of houses, and, to cap the climax, they were persecuted upon suspicion of political and religious heresy and were not allowed to develop any form of instruction in harmony with the results of scientific study and experience."

The teaching force at the beginning of the school year, 1899-1900, consisted of 378 men and 204 women; of the latter, 62 were from the States; these figures show that of the Porto Rican teachers there were two and one-half times as many men as women. This relative proportion was only natural since boys were given preference in the matter of education and had men for teachers.

A majority of the teachers at that time could not be classified as young as that term is understood to-day. In the San German district, where the writer served as super-

visor, the average age of the twenty-five teachers employed was 39 years. At the present time relatively few of the teachers in the service are past middle age, and the average is probably well under 30 years.

A rapid transformation has taken place in the teaching force. With the establishment of higher grades in the elementary schools, high and continuation schools, and the normal school the standard for entering the profession was gradually raised. At the present time a high school diploma is demanded for entrance to the regular normal course, and a ninth grade certificate for entrance to the rural school course. With the introduction of special courses for training rural teachers in high schools, it may be expected that in the near future many rural schools will be in charge of teachers holding high school diplomas.

The establishment of hundreds of new schools presented excellent opportunities to ambitious young women, who otherwise would have been confined to drudgery or idleness, to enter the teaching profession; and hence a rapid shifting took place, resulting on the whole in the employment of many young people with better preparation and the elimination of those who could not hold their own.

The women have far outdistanced the men in numbers. Of the 2,984 teachers employed last year 957 were men and 2,027, or more than two-thirds, were women.

Not many years ago complaints were heard frequently that teachers were strictly confined to their own profession in gaining a livelihood and that other opportunities were not open to them for their material advancement. It is evident from a study of the total number of teachers' licenses in force that this condition no longer prevails. Teachers are leaving the service in large numbers, principally because of the low salaries paid, and successfully compete with other persons in other occupations that are more lucrative. Some have entered other professions. Many have gone into the government service in other departments. Not a few have entered the Federal Government service, while many others occupy business positions. One supervisor reports that nearly all teachers in his district are studying shorthand with a view of securing more remunerative employment. Matrimony is responsible for the retirement of many worthy female teachers since the old custom of depending on the income of a married lady teacher for the support of the family, including the husband, is fast disappearing.

The rapid shifting of teachers into and out of the service has caused school boards and the department no little embarrassment. During the past year 898 new licenses were granted to persons entering the profession for the first time, not including teachers from the continent who presented proper credentials upon which licenses were legally issued. The aggregate number of licenses of all grades in force during the past year is 4,343; nevertheless the department has found it difficult, even impossible, to fill positions provided in the budget. Even in the capital city the school board has experienced great difficulties in adhering to the practice of nominating teachers with ratings of at least "good". Low salaries in the teaching profession and better opportunities in other occupations are responsible to a large extent for this state of affairs.

Recently a new tendency has developed. Teachers are not only turning longing eyes toward opportunities in the United States but a considerable number have actually gone there. Their ambition to improve their professional status and material welfare on the continent is highly commendable, though it is detrimental to the educational interest of Porto Rico. Many of these young men and women accept business employment in the States, but not a few secure positions as teachers of Spanish. Undoubtedly Porto Rico will contribute more and more teachers of Spanish to the United States as the source of supply becomes better known and as Porto Rican teachers make proper preparation for this kind of work. School authorities in the United States demand a college or university degree or at least a normal diploma from prospective candidates, whereas many teachers here fail to appreciate that this demand is not a reflection on their knowledge of Spanish.

Taken as a whole, the teaching staff does not possess high academic and professional preparation. Only 100 teachers out of a total of 4,343 hold degrees from a college or university, and most of those that do are from the States. Only 384, or less than one-tenth, of the total are holders of a normal school diploma; 843, or less than one-fifth, have had two years of normal training above the elementary school course. Aside from normal school and college graduates, 39 have high school or academy diplomas, and 2,677, or 62 per cent, obtained their licenses through examinations, usually after attending brief summer sessions.

Teachers, particularly rural teachers, are often characterized by supervisors as weak and inexperienced. Fully 600 of them taught for the first time during the past school year; some with considerable academic preparation, but too many with neither adequate academic nor professional training.

Frequent changes in the teaching personnel are reported from every district. There have been as many as four teachers in charge of a single school during the past year.

Many schools were closed for long periods owing to the difficulty in finding teachers willing to accept them at the salary paid. Some schools were definitely closed for the remainder of the year.

What teachers may have lacked in the way of preparation and experience has been made up to a considerable extent by an unusual degree of loyalty, industry, devotion to duty, and a spirit of cooperation. They have rendered a signal service in connection with all war work; and rural teachers particularly have contributed materially to the agricultural propaganda carried on by the food commission, assisted by the department of education.

The following statement sets forth the classes and number of teachers' licenses held and the bases thereof:

Academic and professional preparation of teachers.

Teachers holding the principal's license:	
Degree from a college or university.....	28
Four years' normal training.....	280
By examination.....	50
High-school and special teachers:	
Degree from a college or university.....	47
Four years' normal training.....	48
Two years' normal training.....	7
Upon basis of special training.....	69
Teachers of English:	
Degree from a college or university.....	22
Four years' normal training.....	52
High-school or academy diploma or previous license.....	39
By examination.....	4
Graded teachers:	
Degree from a college or university.....	3
Four years' normal training.....	4
Two years' normal training.....	836
By examination.....	785
Rural teachers:	
Normal certificates.....	231
By examination.....	1,838

SUMMARY.

Degrees from a college or university.....	100
Normal school diploma, full course.....	384
Two years' normal training.....	843
One year's normal training.....	231
Upon basis of training.....	69
High-school or academy diploma.....	39
By examination.....	2,677
Total.....	4,243

SUPERVISORS AND SUPERVISION.

One of the most important factors in the promotion of successful school work is the supervisor. Constant and effective supervision of a truly technical character is as necessary in the public schools as it is in the industries. When the American school system was first organized in Porto Rico there was appointed a corps of 16 so-called English supervisors, each one in charge of a district. The first supervisory staff was composed of Americans from the States and two Englishmen. Said Dr. Victor S. Clark, President of the insular board of education, in his first report rendered February 15, 1900:

"These men must be, for some time to come, Americans. Native inspectors suffer many disadvantages; they are not accustomed to the standards of the States and therefore not disposed to require such standards in the schools here. They do not command the same respect from the teachers that well-qualified men from other countries would command at the present time. Finally, many of the most trying and delicate duties of the supervisors are connected with local difficulties arising through partisan political jealousies and animosities. While it may not be impossible to secure impartial action in such cases from native supervisors, it would be impossible to prevent charges of partiality, and the belief on the part of many teachers and patrons of the schools that injustice was being done would weaken the authority of our representatives."

The supervisory force has undergone frequent changes since that time. The number of district supervisors was increased to 41. In addition to the 41 district supervisors there are in the service at the present time a special supervisor of agriculture, of home economics, and of manual training. There are also three general superintendents, one of whom gives special attention to the instruction in Spanish; and the secretary of the department is also the chief of the division of supervision.

As to personnel, there have been frequent changes every year. Other opportunities have attracted the men from the supervisory service with the resultant addition of new blood to the force. Most of the supervisors from the continent have accepted positions in the home land with better remuneration.

For some years past ample consideration, compatible with the good of the service, has been given Porto Ricans in selecting candidates for new appointments. No distinctions are made except on the basis of training, successful experience, and general efficiency. Time and experience have shown that even if the disadvantages of native supervisors, pointed out by Dr. Clark, may have existed 20 years ago, they certainly do not exist today.

At the present time of the 41 district supervisors 13 are American born and 28 are Porto Ricans; 37 are men and 4 are women; 7 are graduates of American colleges or universities, but only one of these is a native Porto Rican; 10 are holders of a normal-school diploma and all hold the principal teacher's license. Practically all of them have taken special courses in normal schools, colleges, or universities, and not a few of them have received practical training in the field as assistants of older and experienced men. In fact, the plan of assigning candidates who apparently possess desirable qualifications for supervisorships to serve as assistants has proved to be one of the most satisfactory means of assuring competency and success in the service.

The duties and functions of supervisors have likewise undergone many changes during the past two decades and have increased from time to time, so that to-day the supervisor of schools probably has more multifarious duties to perform than any other government official in Porto Rico. In the early days the district supervisor was little more than a clerk, a policeman, and a reporter. His business was to observe conditions as they existed and report them to the central office; to see to it that schools were open and teachers on duty during the days and hours specified; to confer with local boards and alcaldes on educational matters pertaining to the district; to report such information as was demanded by the central office.

The functions of the supervisor have been greatly amplified as time has gone by. One of the most important steps taken to give the supervisor proper professional standing in the district was to make him an *ex officio* member of the school board with the right to attend all meetings, to participate in the discussions, to examine all records, but without the right to vote. Thus he became not only the direct representative of the department in the field, but also an exceedingly valuable assistant, counselor, and guide to the school board. Not until recent years have these officials been required to supervise instruction, to study the professional aspects of school work, and to install methods for the improvement of the character and quality of classroom activities, their primary function. At the present time the duties of the supervisor of schools include a wide range of activities. His first function is to improve classroom instruction through the work of teachers, but there are many other duties of an administrative and clerical character that take up a large part of his time. He receives and distributes all textbooks and supplies for the district and keeps a property account of all insular government property in his care. He makes the necessary change reports in the teaching force, so as to enable the central office to make out pay rolls correctly. He attends school-board meetings and assists in the many varied activities taken in these meetings, such as the establishment of new schools, the selection of building sites, school furniture, and equipment, the nomination of teachers, the formation of the school-board budget, and the making of repairs of school buildings. He takes an active and in most cases the principal part, in enforcing the present defective compulsory attendance law. He takes the leading part in the rural campaign to awaken the interest and secure the cooperation of the peasantry in school work. He visits schools and confers with teachers as to the improvement of their work, and prescribes and makes out examinations for pupils. He conducts examinations of candidates for the teacher's license. He confers with patrons of the schools about numerous matters concerning the progress and welfare of pupils. He renders numerous reports to the central office. During the recent war the supervisor of schools has been a leader and promoter of practically all war activities, from the sale of war savings stamps to rendering assistance in carrying out the draft law.

During recent years the department has taken considerable interest in promoting and stimulating the professional growth of the supervisors in the service. It is an easy matter to stagnate in the Tropics, but especially in interior mountain districts. Hence the department has supplied supervisors with the best recent professional books and magazines covering educational administration as well as methods of instruction and supplementary agencies, in order that they may be fully informed of contemporary educational thought and movements. It is largely through the activity, loyalty, industry, and professional knowledge of these men and women in the field that the work of education is successful.

CHANGING CONCEPTION OF THE SCHOOL AS AN INSTITUTION.

The introduction of the American school system in 1899 was hailed with joy by the people of Porto Rico. The public schools have been liberally supported by the legislatures with the resources at their disposal. But at first it was hard for many of the peasantry to understand that the public schools were really free for their children, that everybody, girls as well as boys, now had an opportunity to secure the elements of an education. Indeed there was considerable opposition to the new system in some quarters; coeducation was a thing unheard of at that time, and the system was loudly denounced as improper because boys and girls were being taught together in the same classroom by the same teacher. Aside from any pedagogical and sociological considerations, the system of coeducation, in rural barrios at least, was made necessary on economic grounds. The resources were not sufficient to establish separate schools for boys and girls. It is hardly believable at this time that during the last school year of the old régime there were only 7,158 girls in attendance in the schools of Porto Rico. It is more remarkable still that there is at least one municipality on record where no girls were enrolled at all. It took some years for the masses to learn to understand that the public school offered equality of opportunity irrespective of sex, color, or economic condition. In the school of the old régime the wealthy families paid fees to teachers with the result that fee pupils received far more attention than children from poor families.

To be sure, equality of opportunity was not presented to all because school facilities were far from sufficient and are far from being so to-day, but the school as at present organized has become far more than an instrument for reducing illiteracy, of teaching the elements of an education. In most rural barrios the school has become the center of civic activities and constitutes the only common meeting place available for the people. One of the best evidences of the interest people have in the public schools and of its importance in the lives of the people is the very frequent mention made of schools and school activities in the press. During the period of the war especially the schools took a leading part in all kinds of war propaganda and war work and proved themselves to be not only useful but powerful agencies of the body civic.

The present system is neither complete nor perfect, but its weaknesses and defects are better known to the department of education than to any outsider and every attempt is being made to remove deficiencies with the means at the disposal of the department.

PART II.—EDUCATION IN PORTO RICO, 1918-19.

RURAL EDUCATION.

The total population of Porto Rico on July 1, 1919, as estimated by the Federal Census Bureau, was 1,263,474. The estimated number of children of school age was 441,465. According to the census of 1910, 79.9 per cent of the population is classified as rural. On this basis there now should be about 350,000 children of school age in the rural districts. The total enrollment in rural schools last year was 97,995 or an increase of 13,425 over that of the previous year. It would appear from these figures that there are still a great many rural children in Porto Rico without school facilities. While this is true to a high degree, the figures do not show the exact situation. It must be remembered that the Federal census authorities credited Porto Rico with only 38 towns and cities out of a total of 68 municipalities in 1910 (now 75), each of which has a graded-school system, and all urban centers having a population of less than 2,500 were counted as rural territory. As a matter of fact, there are thousands of children in the territory classed as rural by the census authorities who attend urban schools, and also many children whose homes are really in the country attend the graded schools of the cities. Few rural schools offer work beyond the fourth grade, and families of means who desire their children to continue school beyond that grade enroll them in urban schools. In addition, there is a large semiurban population in Porto Rico, especially in the tobacco districts, and the children of these homes usually attend the graded schools.

The department has continued to give particular attention to the work of the rural school. The rural uplift campaign organized in connection with the school work has been intensified each year and the results have proved highly satisfactory, the rural school having become the center for many activities tending to develop the people of the community.

During the past year 1,622 schools were opened, not including the so-called urban rural schools, as these followed the graded course of study and are considered part of the graded system. Of the 1,622 schools 1,458, or about 90 per cent, were on the double

enrollment plan—i. e., a maximum of 40 pupils were enrolled for a three-hour morning session and another group for a three-hour afternoon session. This arrangement allows all pupils to take their noonday meal at home and makes it possible for the older children to help their parents at home and on the farm during part of the day. This is a very important consideration during the coffee-picking season, from September to December, when the entire population in some districts is employed in the coffee harvest. Thus, while the double-enrollment plan has its serious drawbacks, it insures better enrollment and attendance. In a few rural communities where the people live closely grouped around the schoolhouse the schools are organized for a morning and afternoon session for the same pupils.

Of the total number of pupils enrolled in the rural schools 51,840, or 52.9 per cent, were promoted. Calculated on the basis of the average number belonging, 65.6 per cent of the pupils were promoted. This low percentage of promotion is largely accounted for by the frequent changes in the teaching force, the closing of many schools owing to the lack of teachers, and to the epidemic of influenza.

The withdrawal of teachers, both urban and rural, to enter the military service or to engage in other work was greater this year than the year before. A large number of graded and rural teachers resigned during the course of the year, and as vacancies in the corps of graded teachers are generally filled by the promotion of rural teachers who hold the graded license, the rural schools were the ones most affected. In some instances rural schools had as many as four changes of teachers. In all there were 761 new rural licenses in force, practically half the rural teaching corps.

These numerous changes made the work of the supervisory force and of the department particularly difficult. The policy of the department has been to emphasize constructive supervision. Professional study and reading courses have been established, frequent teachers' meetings and demonstration classes have been held in all the districts, and everywhere much of the supervisors' time has had to be devoted to the strengthening of this unduly large proportion of new rural teachers.

The rural course of study is intended to provide the elements of an education to as many children as possible without seriously impairing the efficiency of instruction. A minimum of essentials has been fixed as the standard and the requirements can not be increased rapidly, as the chief problem is that of providing this minimum for all the children of school age rather than a full elementary course for a limited number. As a general rule the course of study is outlined for the first four grades only. Reading, writing, language, and composition are offered both in Spanish and in English. Arithmetic, including the four fundamentals, nature study and home geography, and the elements of physical geography are also offered. Practical lessons in agriculture, emphasizing vegetable gardening, and work in such industries as hat making, mat and rope making for boys and girls and plain sewing and lace making for girls are prominent features of the rural-school work. Moral and civic training are taught through incidental lessons, a special course of study being provided to offer suggestive material to the teachers. Physical training is also included as part of the course of study.

CONSOLIDATED RURAL SCHOOLS.

During the past year 96 consolidated rural schools were maintained and the number of rooms for each varies from two to four. Where consolidated rural schools are established the organization is carried through the sixth grade. In two of these schools the full eight-grade elementary course of study is maintained.

The department has continued to place strong emphasis on the establishment of this type of school. As suggested last year, better buildings, better equipment, and a fuller and longer course of study, with special provisions for the teaching of home economics, manual training, agriculture, and other industrial subjects, are leading features of the consolidated rural school. These things demand better teachers, and as a logical accompaniment, higher salaries. The consolidated rural school brings together two, three, four, or more rural schools within one building or common center, in contrast with the present isolated school plan wherein an underpaid and often poorly prepared and immature teacher has to struggle alone as best he can with three, four, or more grades under his sole charge and with a large enrollment on the half-day plan. The consolidated rural schools constitute the community centers of their respective barrios, and rural libraries, noonday lunches for the underfed pupils, medical inspection, and entertainments are some of the community improvements that can be brought within the scope of practical, successful achievement.

Further consolidation is primarily a question of financial resources to meet the need of better salaries, better buildings, and better equipment. Consolidated rural schools also presuppose a good system of rural roads. The many streams and rivers that swell into raging torrents at each rainy spell will have to be bridged so as to make it possible for the children of relatively large rural districts to gather together at a com-

mon school center. The problem is not one for immediate and complete solution, but a promising beginning has been made. At present the opportunities for consolidating rural schools are limited to the coast districts, where better means of communication are available. The final solution of the problem of rural education for Porto Rico lies in this direction rather than in the continued increase of the number of isolated rural schools.

RURAL UPLIFT.

Parents' associations have been in operation for the last four years. The following summary gives an idea of both the nature and the extent of the work done in the rural communities:

Parents' organizations.....	1,085
Number of meetings held.....	2,742
Total number of rural conferences.....	1,800
Total number of visits to pupils' homes.....	84,667
Total number of reading centers established in the rural communities.....	156
Total number of rural schools where night sessions for illiterates were maintained ¹	141

¹ These night classes were apart from those maintained by the regular night schools, and teachers did not receive any additional remuneration for this special service.

Through the efforts and cooperation of parents' associations the following results were accomplished in most municipalities: Higher enrollment, better attendance, repair of old roads, opening of some new roads, repair of bridges, repair and painting of many schoolhouses, and the installation of water tanks. In addition thereto, a public spirit has been aroused which affects favorably both the school and the community.

Many districts have reported the establishment of small libraries in rural schools. Books were loaned to the people who attended the reading centers, and in some schools newspapers and magazines were furnished. In some cases pupils paid for the books to be used by the citizens who attended the reading centers.

The following paragraphs are quoted from the annual report of the supervisor of schools of the Caguas district, as an illustration of the activities in which parents' associations were engaged and of the results accomplished:

"The Sunday conferences and meetings alone would after a time become tiresome, but the inclusion of other activities sustains the interest and stimulates the people to new efforts; circular letters have been sent to the school committees giving them suggestions about how they might help the school and the barrio; a newspaper has been published monthly containing accounts of the work done by the rural schools, the school committees, and individuals, as well as articles on agriculture, hygiene, and other subjects. This newspaper was absolutely free from any political or religious prejudice and the language and the ideas expressed were adapted to the condition and capabilities of the jibaros.

"The annual meeting of the representatives of the committees and other people from the barrios is a great aid in spreading progressive ideas among the inhabitants of the rural districts. The distribution of prizes and diplomas to the rural schools, pupils, and farmers added unusual interest to this year's meeting.

"The amount of \$263.75 has been spent by the school committees and parents for rural-school improvements, and the present amount available for use is \$219.67.

"A campaign was started to get sites for our rural schools, but the many interruptions in the school year interfered with our plans. Other matters, such as enrollment, attendance, and schoolroom work in general, required more immediate attention. It seems possible that the sites can be obtained free of cost to the school board, and we expect to continue the campaign early next year."

GRADED SCHOOLS.

The work of the graded schools has been continued along very much the same general lines as in former years. The following points deserve special mention:

1. Oral English is taught in the first and second grades and formal reading is deferred until the third grade. This plan has been continued in view of the excellent results obtained last year in all those districts where the innovation was carefully studied and put into practice. The manuals prepared for the use of teachers in giving instruction in oral English are now being carefully revised and much new material is being added. Mr. Joseph C. Morin, the author of these manuals, has also prepared a third-grade manual which will assist both teachers and pupils in getting a right start in English reading.

The shifting from reading to conversation as a medium for the teaching of English meets the needs of pupils by giving them an oral vocabulary in English, before beginning formal reading, similar to that which they possess in Spanish when they enter school. This plan brings the Porto Rican child a step nearer to the level of the American child who hears and speaks English for four or five years before entering school.

2. The teaching of Spanish, the language of the people, has received a new impetus with the introduction of the "Método Racional" for teaching reading and writing simultaneously. This method is strictly phonetic and practical and has been specially prepared by Mr. José González Ginorio for children whose native tongue is Spanish. The mechanics of reading and writing are mastered in a much shorter time than formerly.

3. Much progress has been made in the teaching of elementary arithmetic during the past year as a result of the new course and the new textbooks specially prepared for Porto Rico. During the first four grades the instruction is given in Spanish and beginning with the fifth grade arithmetic is taught in English.

4. The "hour plan" was in operation in the graded and continuation schools of 28 municipalities, usually with success. In those municipalities where two grades are taught in one room the plan could not be tried. The benefits reported are as follows: Higher percentage of promotion; greater degree of concentration of effort and consequent saving of time; more individual help to pupils; better understanding and use of textbooks. The number of municipalities and the grades in which the plan was in operation are as follows:

	Municipalities.		Municipalities.
Fourth grade.....	2	Eighth grade.....	28
Fifth grade.....	12	Ninth grade.....	14
Sixth grade.....	21	Tenth grade.....	3
Seventh grade.....	22		

Of the 55,073 pupils enrolled in urban schools 61.8 per cent were promoted to the next higher grade. Using the average number belonging as a basis, 76.7 per cent of the elementary urban pupils were promoted. In spite of the drawbacks from which school work suffered during the year, especially the influenza and earthquakes, the percentage of promotion is far more satisfactory than first expected.

The benefits derived from the elimination of the double enrollment and the reorganization of the work of the grades may be gathered from the increase in promotions as set forth in the following table:

Percentage of promotions in the graded schools.

Grade.	1914-15	Period covering general reorganization, introduction of new textbooks, and elimination of double enrollments.				Increase over 1914-15.
		1915-16	1916-17	1917-18	1918-19	
First grade.....	45.9	48	65	64.3	63.6	17.7
Second grade.....	56.7	60	66	73.1	75.7	17.0
Third grade.....	60.8	64	65	72.3	70.8	10.0
Fourth grade.....	62.1	64	63	72.1	66.3	4.2
Fifth grade.....	66.6	66	66	68.6	70.9	4.3
Sixth grade.....	66.8	65	66	75.1	70.7	3.9
Seventh grade.....	70.2	67	71	71.6	70.9	.7
Eighth grade.....	70.6	68	72	74.6	76.1	5.5

HIGH AND CONTINUATION SCHOOLS.

As provided by law, 11 high and 26 continuation schools were maintained by the department of education during the past year, employing 148 teachers. The regular high schools had courses extending over four years. In seven of them both the general scientific and the commercial courses were given.

Teachers well prepared for the special subject assigned to them were available for most of the high schools. In many cases, however, teachers had to carry subjects for which they had no special preparation. This is particularly and increasingly true as regards the sciences.

Some of the high schools were handicapped by constant changes in the teaching force. One high school had three different principals during the past year.

In most of the high and continuation schools the courses of study were carried out as planned, but owing to the many interruptions some modifications had to be made. All students desiring to take commercial work could not be accommodated, especially in the beginning years of the course. While the number of graduates from the four-year high schools shows that the general course students are still in the majority, the outstanding feature in the high-school situation is the large number enrolled in the first year of the commercial course.

In comparatively few towns do the high schools possess adequate housing facilities. The Central High School of Porto Rico is still in temporary quarters, although plans have been completed for the most pretentious school building projected in Porto Rico, which will cost nearly \$400,000 and will accommodate 1,200 pupils.

The high schools of Ponce, Mayaguez, Arecibo, and Humacao occupy buildings specially constructed for this purpose. The Fajardo School will be transferred to a building, the gift of Dr. Santiago Veve, which is now being remodeled. The high schools of Aguadilla, Bayamon, Guayama, Yauco, and Caguas are grouped with grammar rooms in elementary-school buildings.

The attempt to maintain so many high schools has resulted in rather meager equipment and an underpaid teaching force for all of them. Some of the schools, in fact, are not in a position to make use of more equipment because of lack of space. Better equipment, better buildings, and a better paid and more efficient teaching corps are urgently needed.

Practically all of the regular high schools report athletic and social activities similar to those carried on in the high schools in the States. Track, baseball, basket-ball, and tennis teams were formed and interschool contests were held. Literary, debating, and musical organizations were also maintained.

The table below shows that there has been a slight increase in the number enrolled in high and continuation schools. The figures do not include the University High School at Rio Piedras nor the preparatory department of the College of Agriculture at Mayaguez.

	Num-ber.	Enrollment by years.				Total.	Enrollment by sex.		Graduates by courses.		Total.
		1	2	3	4		Male.	Femal.	Gen-eral.	Com-mon.	
Four-year high schools.....	11	1,007	709	551	355	2,622	1,247	1,375	225	49	274
Continuation schools.....	26	646	197	.....	.....	843	354	489	.....	.....	.....
Total.....	.....	1,653	906	551	355	3,465	1,601	1,864	.....	.....	.....

Total enrollment 1918-19..... 3,465
 Total enrollment 1917-18..... 3,346

Increase in enrollment..... 119

PREVOCATIONAL WORK.

Home economics.—During the entire first semester the work in home economics was so intimately related to the work of the junior Red Cross that the section giving an account of the activities of the latter organization is fairly descriptive of the work of the teachers of home economics and of the pupils under their direction.

Practically no attempt was made to follow the regular course of study until the beginning of the second semester, and even during the second semester the work in sewing consisted largely of Red Cross work, principally the making of refugee garments. In addition to the regular classroom periods much extra time outside of school was given to this work, both by teachers and pupils. One of the problems assigned to the classes of the Labra School, of San Juan, was the making of a service flag, containing 450 stars, for the department of education.

A successful attempt was made to modify the courses in cooking so that native food products could be used to the practical exclusion of high-priced imported articles. The teachers and pupils were of immeasurable assistance in helping to carry out the orders and regulations of the food commission and in teaching the proper methods of preparing substitutes for the prohibited or unobtainable articles of food. The home economics department was specially active in cooperating with other school agencies in the school and home garden movement and in stimulating the production of native vegetables.

A further call for additional efforts came after the earthquake. Through the Red Cross, the teachers and pupils of the home economics classes were asked to furnish garments for hundreds of destitute children. The response to this call was instant and effective. In addition to all these activities, in many towns the home economics teachers assisted in caring for the sick during the epidemic of influenza. The practical training in sanitation offered in the schools proved its worth in this crisis.

The work during the year was highly successful, especially from the standpoint of increased food production, conservation, and adaptation, and in arousing interest in making Porto Rico less dependent on the mainland for the essential foods. The war brought a realization of the extent to which we had been importing foodstuffs and the privations that would result if communications with the mainland should be seriously interrupted. It was abundantly proved that Porto Rico can be very largely self-supporting.

Manual arts.—The opening of the school year found the manual arts teaching force sadly depleted. The majority of experienced teachers had entered the military service. To provide teachers for all the schools it was necessary to offer a special summer course in manual arts at the College of Agriculture and Mechanic Arts. This summer school was attended by 54 men, the majority of whom were high school graduates who had done good work in manual arts as students and who had been recommended by district supervisors as possessing the necessary qualifications for becoming successful teachers. Another serious difficulty was encountered in securing supplies. Owing to the continuance of war conditions only such space on the boats as the government did not need for its own purposes was available for other supplies. As practically all the manual training supplies come from the north, many delays in equipping the schools occurred.

Work in manual arts was carried on in 49 municipalities. There were 137 sixth grade boys who pursued this work in 10 municipalities; 996 seventh grade boys in 43 municipalities; 1,002 eighth grade boys in 46 municipalities; 411 ninth grade boys in 31 municipalities; and 213 tenth grade boys in 21 municipalities; making a total of 2,759 boys who received the benefits of this important branch of instruction.

Prevocational summary.

Urban schools:

Classrooms in which regular courses in manual arts were given.....	188
Classrooms in which regular courses in home economics were given.....	176
Classrooms in which some form of elementary handwork was given.....	93
Classrooms giving plain sewing.....	72
Classrooms giving no prevocational work of any kind.....	671

Rural schools:

Classrooms reporting regular work in manual arts.....	7
Classrooms reporting regular work in home economics.....	41
Classrooms reporting elementary handwork.....	151
Classrooms reporting plain sewing.....	371
Total number of rural schools reporting no prevocational work of any kind.....	183

WORK IN AGRICULTURE.

School and home gardens.—The campaign for the promotion of the agricultural interests constituted one of the most important phases of the educational work of the year. In this campaign the department of education worked in cooperation and in harmony with the local food commission. Supervisors, teachers, school boards, pupils, and the people in general gave their full cooperation.

The campaign was successful in most cases. In some sections the production per garden was small because of the lack of rainfall. This is particularly true of the southern coast and of a few other places. Supervisors report that in most cases the produce was given to the school children; in other cases it was sold and the money was given to the pupils. Some schools donated the money received from the sale of vegetables to the Red Cross. Other ways of disposing of funds received for garden products are the following: To repair tools; to make fences for the protection of school gardens; to buy clothing for needy children; to buy new seeds; to support in part charitable institutions; to buy and equip first-aid cases and supplies.

The favorite crops cultivated are: Lettuce, sweet potatoes, beans (all classes), tomatoes, sweet peas, peppers, eggplant, beets, yams, potatoes, yuca, onions, corn, sugar-cane, quingombos, carrots, frijoles, cabbages, melons, squash, ginger, rice, bananas, celery, garlic, millet, radish, yautia, plantains, peanuts, gandules, garbanzos, ajonjolí, cucumbers, pumpkins.

Summary.

Number of schoolrooms in which instruction in agriculture was given.....	1,464
Total number of cuerdas under cultivation for instructional purposes during the year.....	597
Total average of crops raised in each school garden.....	13
Total number of home gardens in urban centers.....	11,185
Average per town.....	169
Total number of home gardens in the country.....	53,636
Average per municipality.....	752
Total average of crops raised in each home garden.....	9

The districts reporting the greatest number of home gardens, both urban and rural, are as follows:

Ponce.....	5,268	San German.....	1,761
Barros.....	2,762	Rio Piedras.....	1,628
Coamo.....	2,037	Camuy.....	1,300
San Sebastian.....	1,906		

AGRICULTURAL EXHIBITS.

During the past year exhibits or fairs were held in 20 different towns or barrios. Caguas reports having held 5 exhibits, Ciales 3, Lares 2, Corozal 2, and Bayamon 2. The total number of such fairs was 29. Prizes were provided for the products exhibited by school children from funds set aside by the Junior Red Cross, and from money donated by local contributors.

AGRICULTURAL MEETINGS.

Agricultural meetings were held in 65 different municipalities, with a total number of 1,846, making an average of 45 meetings per district.

NATIVE INDUSTRIES.

Instruction in native industries is still carried on to a considerable extent, but in the face of many handicaps. It has been possible to provide only a relatively small proportion of the children with instruction of this kind. Thirty-one municipalities offered no work of this kind. The other municipalities had a total of 153 classrooms in which some form of instruction in native industries was given. One district reported 600 rural and urban pupils as having received this kind of instruction. The number of classrooms making the different products are as follows: Hats, 69; baskets, 16; rope, 6; embroidery, 4; lace, 4; hammocks, 3; brooms, 3. Other forms of elementary handwork not included in the above were reported by 84 classrooms.

The particular kind of instruction given is determined largely by the local raw material available. The raw material employed includes palm fiber from which hats are made, raffia, maguay, bejuco, emajagua bark, grasses, vines, and bamboo. Although all but the raffia can be secured in Porto Rico, some hat fiber was imported from Santo Domingo. It hardly seems possible that these native industries can be developed without considerable help, as a dependable source of supply of raw material does not appear to exist. This condition could be remedied if there were a ready market for the salable goods produced. Funds are also needed for expert instruction and standardization of products.

In forming an estimate of the work along this line it must be kept in mind that it is carried on in addition to the regular curriculum which includes manual training and home economics in urban schools and plain sewing and agricultural work in rural schools. The work in native industries is entirely voluntary and no regular school credit is offered because it is not included in the course of study for the common schools.

The extra strain on the schools this year caused first by the necessary emphasis on food production and conservation due to the continuance of the war, and, later, by the epidemic, made it impossible to devote to this matter the time and effort that it deserves. The lack of funds for the purchase of raw material is a big obstacle hindering the progress of this work. Only one supervisor states specifically that the local school board furnished the means for the purchase of raw materials. As a rule pupils were required to bring their own materials, and in some cases teachers supplied them. No great results can be hoped for until more definite plans are made for securing raw materials.

The following suggestions are offered to offset existing deficiencies:

Special teachers should be secured, competent to instruct the teachers who attempt to carry on this work.

In case the present plan is continued, teachers who carry on the work in native industries in addition to their regular work should receive additional compensation.

The objects to be made should be determined by the supply of raw material locally available and should be salable. An organized effort to market the salable objects should be made. This would necessitate standardization of products if more than a local market is contemplated. It is urged that the carludovica palm be imported and its extensive planting be encouraged as a stimulus to the native hat industry.

A regular course of instruction to be included in the common school curriculum, especially for the rural schools, should be outlined.

THE JUNIOR RED CROSS.

The commissioner of education, together with Dr. José Gómez Brioso, president of the school board of San Juan, and Miss Grace Ferguson, supervisor of home economics, continued their services as the chapter school committee of the Porto Rico chapter of the American National Red Cross.

In every municipality there was appointed a local committee of three members consisting, as a rule, of the supervisor of schools or the acting principal, the president of the school board, and a teacher, usually the teacher of home economics.

Owing to the fact that the first membership campaign was carried out late in the preceding year, it was deemed advisable not to make a new membership drive early in the year. The schools had been in session only a few months when they were called on to raise money for the relief of earthquake sufferers in the western part of the island. This task was undertaken in addition to the work already under way of making refugee garments for children in France and Belgium.

In November practically all school districts undertook the work of organizing the "Victory Boys" or "Muchachos Libertadores" as they are called in Spanish, thus minimizing to some extent the money-raising activities of the Junior Red Cross.

The work of making garments and hospital supplies by the girls in the home economic classes, which was under the immediate direction of Miss Ferguson, was continued in all schools offering work in home economics. Many girls who are members of the Junior Red Cross rendered valuable assistance in carrying out the work assigned to the local committee of regular organization and for which they did not receive any credit officially.

Immediately after the disastrous earthquake of October 11, 1918, the Junior Red Cross cooperated in relief work, especially in the matter of distributing clothing to destitute children and feeding starving people in Anasco, Aguadilla, and Mayaguez.

In December, when the epidemic of influenza became general and necessitated the closing of the schools, the junior members of the Red Cross took their part in rendering much needed assistance.

Throughout the year the Junior Red Cross was called upon to help in a variety of ways in the many civic and patriotic undertakings in which the schools took so large a part. Under the direction of local Junior Red Cross committees, aided by teachers, bazaars, kermesses, and other activities were organized and carried out for the purpose of raising funds. The local organizations conducted the sale of candy, made by the home economic classes, articles made by the boys in manual training, and the product of home and school gardens.

The Junior Red Cross has been instrumental in recruiting members for the parents' organization. One supervisor reports that out of a total of 115 new members enrolled 95 were secured through the solicitation of the juniors. Another supervisor states that in one town the teachers with the help of the juniors secured 166 new members.

The chairman of the committee visited national headquarters in Washington in February, and after conference with the director of junior membership it was resolved that due to the abnormal conditions which prevailed in Porto Rico all memberships of the previous year were to be continued without the renewal of the membership fee. Notice to this effect was sent out to all local committees. Nevertheless the enthusiasm of the junior members and the local committees was stronger than the decision with reference to new membership made in Washington. New members and renewals were made in 23 municipalities with a total of 7,144 new members. These memberships have been credited to the year 1919-20.

The Junior Red Cross has also been instrumental in promoting the school and home garden movement, which was so essential for the purpose of assisting in providing an adequate food supply in Porto Rico during the war. The national authorities consented to the expenditure of Junior Red Cross funds for the promotion of this movement.

General summary.

Total membership for 1918-19.....	68,018
New members credited to 1919-20.....	7,271
Fees credited to 1919-20.....	\$2,072.91

RÉSUMÉ OF ACTIVITIES SINCE ORGANIZATION.

Purchased three ambulances for use in Europe.
 Endowed a room in French Hospital.
 Made 500 camp chairs for Porto Rican soldiers at Camp Las Casas.
 Assisted in promoting 26,693 home gardens in 1917-18 and 64,548 in 1918-19.
 Distributed \$653 in prizes for home garden products.
 4,693 refugee garments and 2,696 bedside bags were completed and material and incidental expenses paid from Junior Red Cross funds.

Assisted regular local committees in Red Cross work.
 1,410 additional garments were distributed to earthquake sufferers.
 Established lunch rooms for suffering children in Anasco, Aguadilla, and Mayaguez after the earthquake.
 Expended \$2,368.12 for earthquake relief.
 Contributed \$8,000 for relief work in the Near East.
 The Junior Red Cross did not spend a single cent for services.

Financial summary.

Total receipts since first organized.....	\$24,985.35
Total expenditures.....	17,495.78
Balance on hand:	
Cash.....	\$7,339.62
Liberty bonds.....	150.00
Total.....	7,489.62

SCHOOLMEN IN THE MILITARY SERVICE.

The department of education takes considerable pride in the fact that so large a number of men who occupied educational positions entered the military service.

Educational facilities for the people at large were sadly lacking under the Spanish régime and for that matter are far from sufficient at the present time. However, when the war department decided definitely to establish a military camp in Porto Rico the question of providing officers for the Porto Rican troops immediately presented itself. It was but natural that these soldiers should be officered by men who spoke their language and who at the same time possessed a degree of education and personal qualities of leadership to fit them for reserve officers. The number of such men in Porto Rico is still limited. Naturally the educational service enjoyed the privilege and honor of contributing a considerable number of reserve officers. In fact, Gen. Orval P. Townshend stated that had it not been for the school-teachers the military authorities could have not secured a sufficient number of properly qualified men in Porto Rico to serve as officers. The commissioner of education was fully aware of the fact that school work would be crippled temporarily, but in view of the greater service to be rendered the Nation supervisors and teachers were urged to enter training camps. These men were not of poor or mediocre types. They represented the very best the service had to offer.

Since the United States entered the great World War, up to the signing of the armistice on November 11, 1918, 276 schoolmen, exclusive of students, entered the military service. Of this number 10 were supervisors of schools; 6 instructors in the university; 7 instructors in the College of Agriculture and Mechanic Arts; 6 school board members; 2 administrative officers of the university; 5 high school principals; 1 graded school principal; 15 teachers of academic subjects in high schools; 18 manual training teachers; 14 teachers of English; 2 special teachers of agriculture; 53 English graded teachers; and 137 rural teachers.

Of the aforementioned number, 6 were granted commissions as captains, 20 as first lieutenants, 76 as second lieutenants; 167 were non-commissioned officers or privates; 3 were in the aviation service, 2 in the Navy; and in the case of two their rank and location were unknown.

To the above number should be added 79 students of the university, high, and continuation schools, of whom 4 received commissions as first lieutenants and 24 as second lieutenants. The remaining 51 were either non-commissioned officers or privates.

Units of the Students' Army Training Corps were established in the University of Porto Rico and the College of Agriculture and Mechanic Arts. Because of the late military registration the first inductions were completed on November 4. Only 94 had had their papers approved and had been formally inducted when the order to demobilize was received following the signing of the armistice.

In order that there may be a record of all schoolmen engaged in educational work in Porto Rico who entered the military service, the complete list is given herewith, not including the names of students inducted into the S. A. T. C.

School men of Porto Rico in the military service.

Alers, Mario	Rural teacher	Private.
Alvarez Pillot, Julián	Rural teacher	Private.
Amy, José C.	English graded	First lieutenant.
Aponte, Ignacio	English graded	Second lieutenant.
Armstrong, James	Manual training	Aviation service.
Armstrong, Julián	Manual training	First lieutenant.
Arce Rosa, José	Rural teacher	Private.
Arroyo, Ricardo	Rural teacher	Private.
Arzola, Rafael	Rural teacher	Private.
Audas, Garret E.	Teacher of English	Private.
Avila, Pedro	Rural teacher	Private.
Batá, José M.	English graded	Second lieutenant.
Babcock, Lawrence M.	High school teacher	Second lieutenant.
Báez, Armáando	Rural teacher	Private.
Ballester, Saturnino	Rural teacher	Sergeant.
Barta, Joseph F.	Manual training	Second lieutenant.
Baurá, Antonio	Rural teacher	Sergeant.
Berrios, Cándido	Rural teacher	Private.
Bocanegra López, E. N.	Instructor, University of Porto Rico	Medical Corps. First lieutenant.
Bunting, E. J.	Supervisor of schools	Captain.
Buitrago, José	Rural teacher	Private.
Burdick, Clifford L.	High school teacher	Private.
Cabrera Márquez, José	Rural teacher	Second lieutenant.
Cabrera, M.	Administration Department, College of Agriculture	Private.
Caraniti, Pedro M.	English graded	Captain.
Carrión, Antonio	Rural teacher	Private.
Caratena, Luis	Rural teacher	Private.
Carrasquillo, Rafael	English graded	First lieutenant.
Casablanca, Luis	English graded	Private.
Casey, Arthur S.	Manual training	Aviation service.
Cassidy, Charles P.	High school principal	Private.
Castrello, Antonio	Rural teacher	Private.
Castro, José	Rural teacher	Private.
Cerezo, Armando	Rural teacher	Private.
Cintrón, Francisco Modesto	English graded	Private.
Clavell, Antonio	High school teacher	Second lieutenant.
Clavell, Cosme	English graded	First lieutenant.
Coddington, James W.	Supervisor of schools	Second lieutenant.
Colón Alonso, Jacinto	English graded	Second lieutenant.
Colón, Arcadio	Rural teacher	Private.
Colón, Catalino	Rural teacher	Private.
Colón, Delfín	School board member	Private.
Colón, Juan Antonio	Rural teacher	Private.
Colón, Juan J.	Rural teacher	Private.
Colón, José O.	Rural teacher	Private.
Colón, Luis	Manual training	Second lieutenant.
Colón Velez, Alejandro	Rural teacher	Private.
Comas, Arturo	Rural teacher	Private.
Cora, Alberto	Rural teacher	Private.
Cora, Luis	School board member	Private.
Corlett, Harold S.	Supervisor of schools	Second lieutenant.
Costas Pérez, Jaime	Rural teacher	Private.
Couret, Pedro	Rural teacher	Private.
Cruz Feliú, Antonio	Rural teacher	Private.
Cruz, Silvestre	English graded	Private.
Cumpiano, Augusto	Rural teacher	Private.
D'Acosta, Julio	Grade school principal	First lieutenant.
Dávila, Lorenzo J.	School board member	Private.
Dávila, Rafael	English graded	Second lieutenant.
de Jesús, Quiñín	Continuation teacher	Second lieutenant.
Delgado López, Francisco	Rural teacher	Private.
Danbo, Russel	High school teacher	Second lieutenant.
Díaz, Miguel M.	Rural teacher	Private.
Díaz, Vicente M.	English graded	Second lieutenant.
Doane, Roland O.	Instructor, College of Agriculture	Private.
Domínguez, José	Rural teacher	Private.
Drew, Jaime L.	Teacher of English	Second lieutenant.
Duedo, Dr., Manuel	School board member	First lieutenant. Medical Corps.
Durán, José	Rural teacher	Private.
Easterling, Thomas L.	Teacher of English	Corporal.
Ebaugh, C. D.	Teacher of English	Second lieutenant.
Enríquez, Enrique	English graded	Second lieutenant.
Escalera, Antonio	Rural teacher	Private.
Estrada Fonet, Eloy	English graded	Y. M. C. A.
Feliciano, Claudio	Rural teacher	Private.
Franceschi, Fido	English graded	Private.
Franqui, Andrés	Rural teacher	Private.
Felliberty, Angel R.	Rural teacher	Private.
Feliciano, Lino	Teacher of Agriculture	Private.
Ferrate, Juan	Rural teacher	Private.
Ferry, Orrin R.	Instructor, College of Agriculture	First lieutenant.
Figueroa, José	Manual training	Second lieutenant.
Figueroa, Arcadio	English graded	Private.
Figueroa, Carlos E.	Rural teacher	Private.

Figueros, Emillano	Rural teacher	Private.
Figueros, Juan G.	Rural teacher	Private.
Figueros, Victor M.	English graded	Second lieutenant.
Figueros Ventura	Rural teacher	Private.
Flores, Jacinto	Rural teacher	Private.
Flores, Tomás	Rural teacher	Second lieutenant.
Forbush, Wallace C.	Instructor, College of Agriculture	Second lieutenant.
Gallardo, José	Rural teacher	Second lieutenant.
García, Gabriel	Principal teacher	Second lieutenant.
García, José S.	Rural teacher	Second lieutenant.
García, L. Martiniano	English graded	Second lieutenant.
Ginestre, Luis	Rural teacher	Private.
Girdu, Puro	English graded	Second lieutenant.
González, Adolfo	Manual training	Private.
González, Bartolomé	English graded	Private.
González, Gonzalo	English graded	Second lieutenant.
González, Luis	Rural teacher	Private.
González, Manuel A.	Rural teacher	Private.
González Orona, José Ant.	Rural teacher	Private.
Gotay, Emerico	English graded	Private.
Hernández, Vicen's	English graded	Private.
Hernández, Emilio	Rural teacher	Private.
Hernández, Luis C.	Instructor, University of Porto Rico	Second lieutenant.
Hernández, Pedro	Rural teacher	Private.
Howe, Arthur M.	Instructor, University of Porto Rico	Second lieutenant.
Heyman, Benedict	High-school teacher	Private.
Iglesias, Eulallo	Rural teacher	Private.
Irizarry, Jr., Eustaquio	English graded	Private.
Irizarry, Herminio	English graded	Private.
Irizarry, Luis A.	Supervisor of schools	Captain.
Jenkins, L. V.	High-school teacher	Private.
Jiménez, Rafael	Manual training	Second lieutenant.
Joachim, Jr., Joseph	Teacher of English	Private.
Kelly, J. C.	Supervisor of schools	Private.
Knight, Ralph G.	Manual training	Private.
Krippene, H. L.	Administration Department, University of Porto Rico	First lieutenant.
Lacot, Rafael	Rural teacher	Private.
Lebrón, Ramón Claudio	Rural teacher	Private.
León, Juan N.	Teacher of English	Private.
López, Arturo	Rural teacher	Second lieutenant.
López, Enrique	Rural teacher	Second lieutenant.
López, Escolástico	Rural teacher	Private.
López, Pedro	Rural teacher	Private.
Lucena, Maximino	Rural teacher	Private.
Lutzen, Martin A.	Manual training	Second lieutenant.
Luzarris, Dolores	Rural teacher	Private.
Lynch, D. F.	Supervisor of schools	First lieutenant.
Luch Mattel, Luis	English graded	Second lieutenant.
Maldonado, Constantino	Rural teacher	Second lieutenant.
Maldonado, Luis	English graded	Private.
Marín, Juan	English graded	Second lieutenant.
Martín, H. A.	High-school principal	Second lieutenant.
Martínez, Antonio G.	Rural teacher	Private.
Martínez, Guillermo	English graded	Second lieutenant.
Martínez, Rafael	English graded	Private.
Martínez, Ramón	Teacher of English	First lieutenant.
Martínez González, Luis	Rural teacher	Private.
Massol, Domingo	Rural teacher	Private.
Matos Hernández, Juan	Rural teacher	Private.
Maun, Vere	Teacher of English	United States Navy
Mauney, E. J.	Instructor, College of Agriculture	First lieutenant.
McCormack, Hermel	Teacher of English	Second lieutenant.
McDougall, H.	Instructor, University of Porto Rico	Second lieutenant.
McMillan, P. J.	Instructor, College of Agriculture	Private.
Meifas, Diego	Rural teacher	Private.
Meléndez, Pedro	Rural teacher	Private.
Méndez, Ernesto	Rural teacher	Private.
Mendoza, Juan	English graded	Corporal.
Merrado, José	Manual training	Private.
Millán, Aurelio	Rural teacher	Private.
Miura, Fernando	Manual training	Private.
Modesto, Rafael	Rural teacher	Private.
Morales, Candelario	English graded	Second lieutenant.
Morales Jimenez, José	Rural teacher	Private.
Morales, José D.	Rural teacher	Private.
Morales, José	Rural teacher	Private.
Morín, José	Rural teacher	Private.
Muniz Rivera, Félix	English graded	Private.
Muniz Rivera, Pedro	English graded	Private.
Narvaes Fuentes, José	Spanish teacher	Private.
Navas, Manuel	High-school teacher	Captain.
Nazario, Jr., Manuel	English graded	Private.
Nothnagel, William H.	Manual training	Corporal.
Oliveras, Blas	English graded	Second lieutenant.
Olivero, Carlos	Rural teacher	Private.
Ortega, Martín	Rural teacher	Private.
Ortiz, Arsenio	Rural teacher	Private.
Ortiz, Felipe	Rural teacher	Private.

Osoorio, Rafael	Rural teacher	Second lieutenant.
O'Toole, John P.	Manual training	First lieutenant.
Paradis, Domingo	Rural teacher	Private.
Paros, Manuel	Rural teacher	Second lieutenant.
Park, Nelson R.	High-school principal	First lieutenant.
Pérez Anillo, Jesús	Rural teacher	Private.
Pérez, Dionisio	Rural teacher	Private.
Pérez, Hermógenes	Rural teacher	Private.
Pérez, Ramón	Rural teacher	Private.
Phillely, Charles F.	Teacher of English	Second lieutenant.
Pimentel, Luis	Rural teacher	Second lieutenant.
Piñeiro, José	Rural teacher	Private.
Piñeiro, Luis	English graded	Private.
Porrata Doria, Adolfo	English graded	Second lieutenant.
Puig, Enrique	Rural teacher	Private.
Pugh, Frank S.	Supervisor of manual arts	Second lieutenant.
Pujols, Jaime	Rural teacher	Second lieutenant.
Quilones, José M.	Rural teacher	Private.
Raballine, Servanio	Supervisor of schools	First lieutenant.
Rafucel, Francisco L.	School-board member	Private.
Ramírez, Angel	Rural teacher	Private.
Ramírez, Rodolfo	Instructor, University of Porto Rico	First lieutenant.
Ramos Sánchez, Francisco	Rural teacher	Sergeant.
Redding, William F.	Instructor, College of Agriculture	Second lieutenant.
Ríos Fitzpatrick, Vicente	Rural teacher	Private.
Ríos, José D.	Rural teacher	Second lieutenant.
Ríos, Rosendo	Rural teacher	Second lieutenant.
Rivera, Aquilino	Rural teacher	Private.
Rivera, Carlos	Rural teacher	Private.
Rivera, Domingo G.	Teacher of English	Second lieutenant.
Rivera, Juan	English graded	Private.
Rivera Morganty, Jesús	Rural teacher	Private.
Rivera, Pascasio	Rural teacher	Private.
Rivera Sicaró, José	English graded	Private.
Rodríguez, Alejandro	Rural teacher	Private.
Rodríguez, Gregorio	Rural teacher	Private.
Rodríguez, Jesús	Rural teacher	Private.
Rodríguez, José Angel	Rural teacher	Private.
Rodríguez, Manuel	Rural teacher	Private.
Rodríguez, Osvaldo	Rural teacher	Private.
Rodríguez, Salva	Rural teacher	Second lieutenant.
Rodríguez, Vicente	Rural teacher	Private.
Rodríguez, Modesto	High school teacher	Captain.
Román, Fortunato	English graded	Second lieutenant.
Romero Rodríguez, Eubaldino	Rural teacher	Second lieutenant.
Ronda, Armando	Rural teacher	Private.
Rosario, Braulio	Rural teacher	Naval Infantry.
Rosario, Luis	Rural teacher	Private.
Saez Garriga, Manuel	English graded	Private.
Saez Sedra, M.	School board member	Private.
Saavedra Soler, José	Rural teacher	Private.
Sánchez, Cristóbal	English graded	Private.
Sánchez, Enrique	Rural teacher	Private.
Sánchez, José V.	Rural teacher	Private.
Sánchez, Saturnino E.	Rural teacher	Private.
Sánchez, Ruiz, Jorge	Rural teacher	Private.
Santiaño, José L.	Rural teacher	Private.
Santiaño, Luis	Rural teacher	First lieutenant.
Santo Domingo, Domingo	Rural teacher	Private.
Santos, Feliciano	English graded	Private.
Seda, Ramón	Rural teacher	Second lieutenant.
Searra, José E.	Rural teacher	Second lieutenant.
Searra, Pérez Manuel	Rural teacher	Second lieutenant.
Serrano, Garrastegui, Juan	English graded	Private.
Sides, Winfield M.	Instructor, College of Agriculture	First lieutenant.
Sierra, Martín	Rural teacher	Private.
Sierra, Saturnino	English graded	Second lieutenant.
Silva, Miguel A.	Rural teacher	Private.
Smith, J. P.	Teacher of English	Private.
Soltero, Augusto	High school teacher	First lieutenant.
Solteras, Luis A.	Rural teacher	Second lieutenant.
Souchet, Agustín	Rural teacher	Private.
Spicer, R. H.	Supervisor of schools	Second lieutenant.
Spuller, Lawrence	Teacher of English	Second lieutenant.
Storns, Karl	High school teacher	Deceased March, 1918.
Symonds, Merrill E.	High school teacher	Second lieutenant, Aviation service.
Tarrio, Jorge	Rural teacher	Private.
Tenney, Albert W.	Manual training	Second lieutenant.
Tirado, Eladio	Rural teacher	Private.
Torrens, Sergio	English graded	Private.
Torres, Abraham	Rural teacher	Second lieutenant.
Torres, E.	Manual training	Second lieutenant.
Torres, Fernando	Rural teacher	Private.
Torres, Francisco	Rural teacher	Private.
Valle, Carlos C.	Instructor, University of Porto Rico	Second lieutenant.
Vázquez, Arcenio	Rural teacher	Private.

Vázquez Bruno, Edgardo	English graded	Second lieutenant.
Vázquez, Rafael	English graded	Second lieutenant.
Velasco, Vicente	Rural teacher	Private.
Verges, Luis	English graded	Second lieutenant.
Vicenty, Guillermo	Rural teacher	Private.
Vigil, Rafael	Rural teacher	Private.
Vigo, Luis	Rural teacher	Private.
Vilches, Juan	Rural teacher	Private.
Vivas, Rafael	English graded	Private.
Walsh, C. J.	Supervisor of schools	Second lieutenant.
Webster, Wm C.	Teacher of english	
Williamson, Harvey O.	High school principal	Second lieutenant.
Whatts, Angel	Manual training	Private.

Students from the university, high, and continuation schools in military service.

Acosta, Juan H.	Haddock, Augusto.	Peña, Eliseo.
Aguirre, Gabriel.	Iglesias, Ruperto.	Pérez, Galo.
Andino, Pablo.	Jackson, Isaac.	Philippi, Gonzalo.
Arrovo, Segundo.	Lamboglio, José A.	Pirazzi, Rafael.
Arrufat, Francisco.	López, Ernesto.	Pizarro, Enrique.
Barnes, Joaquín.	López, Fernando.	Porrata, Adolfo.
Beauchamp, Frisco.	López, Rafael.	Ramírez, Amador.
Blanco, Daniel.	Mangual, Sergio.	Ramírez, Germán.
Carro, Felipe.	Maranges, José.	Rocafort, Antonio.
Casanova, Mario.	Marcantoni, Pedro.	Rodríguez, Juan José.
Cerezo, Carmelo.	Marques, Juan.	Rodríguez, T.
Charrier, Rafael L.	Marrero, Fernando.	Román, Dionisio.
Colón, Ramón.	Martínez, Fdmando.	Romanace, S.
Cruz, Juan.	Martínez, Ramón.	Rosa, Ramón.
Cruz, Julio.	Martínez Zeron, José.	Rosado, Francisco.
De Jesus, Luis.	Medina, F.	Ruiz, Ramón.
Díaz Reyes, Victor.	Modesto, Arturo.	Samper, Antonio.
Escoba, Abigal.	Moncola, P. A.	Sánchez, Pedro.
Farbelle, Francisco.	Monsanto, Miguel.	Santiago, L. F.
Farbelle, Pedro.	Muñoz, Carlos.	Schmidt, Joseph.
Figueroa, Fernando.	Muñoz, Luis.	Torrellas, Rafael.
Figueroa, Juan.	Muriel, Tomás.	Valdezate, Celestino.
Flores, Pedro.	Navarro, Antonio.	Vargas, Tomás.
Font, Jacinto.	Oliver, Juan L.	Vásquez, Ignacio.
García, José S.	Ortiz, Alfredo.	Vila, Salvador.
García, L. O.	Ortiz, Maldonado, Resituto.	
Goncochea, Rafael.	Pagán, Francisco.	

VICTORY BOYS.

When the campaign of the United War Work Societies was started in Porto Rico the committee in charge decided that the best way in which the schools could help was by organizing groups of Victory Boys, locally called "Muchachos Libertadores". A subcommittee composed of business men, Y. M. C. A. workers, and school men was formed to take charge of this activity. The members of this committee distributed the necessary information and outlined the plan of procedure. Each school was asked to distribute pledge cards to the boys, on which they promised to raise money by their own efforts and to donate it to the general fund. The amounts varied from \$2 pledged by boys under 16 years of age to \$5 offered by older boys. The work was taken up with enthusiasm and a great many pledge cards were signed. The signing of the armistice shortly after the work was well launched weakened the campaign and, in some localities, the work was entirely abandoned. Persons not in sympathy with the movement took this occasion to spread false propaganda as to the purposes for which the money was being raised. In spite of this drawback \$6,658.95 were collected. The municipalities and the amounts raised in each is given below:

Adjuntas	\$45.00	Luquillo	\$15.10
Aguas Buenas	133.00	Lares	60.00
Bayamon	131.92	Maunabo	25.00
Carolina	150.58	Maricao	24.00
Cayey	82.00	Naguabo	13.38
Caguas	132.62	Naranjito	74.34
Cidra	17.85	Penuelas	45.52
Camuy	176.84	Ponce	1,733.99
Corozal	30.53	Rio Piedras	385.86
Dorado	16.50	Rincon	86.16
Gurabo	46.00	San German	40.00
Guayanilla	42.25	San Juan	2,581.52
Guanica	26.06	San Lorenzo	49.51
Guaynabo	14.36	Toa Alta	30.79
Guayama	43.30	Yabucoa	18.50
Hatillo	45.01	Yauco	30.00
Hormigueros	25.00		
Isabela	104.30		
Jayuya	56.77	Total	6,658.95

WAR SAVINGS AND THRIFT STAMPS.

The sale of War Savings and Thrift Stamps figures prominently among the numerous activities undertaken by the school children of Porto Rico. Pupils not only canvassed the towns selling stamps, but also took part in parades and other exercises of a public nature so as to arouse public enthusiasm. Some of the methods used to stimulate the sale of stamps were: Selling contests, competition between various Thrift Clubs and War Savings Societies, publication of honor lists, and presentation of flags or other emblems to the group that showed the greatest activity in the sale of stamps. The total amount of stamps reported sold was \$21,699.25. Only one municipality failed to report.

LIBERTY BONDS.

As in the past, the schools helped to make the Liberty Loan drives successful. Schools, teachers, and supervisors all bought bonds. The following table shows how the sale of Liberty Bonds was distributed in the school organization:

	Number.	Amount.
Bonds bought by schools.....	118	\$5,900.00
Bonds bought by teachers, principals, and supervisors.....	1,895	94,750.00
Bonds sold by teachers and pupils.....	3,605	180,250.00

SCHOOL HOLIDAYS AND FESTIVALS.

The celebration of school holidays has been this year, as in the past, an excellent means of establishing closer relations between the schools and the public. On the occasion of these celebrations exhibits of work done in the classroom are usually displayed, thus giving the parents a clear idea of what is being accomplished in the school.

Some of the holidays observed were: Washington's Birthday, Columbus Day, Thanksgiving Day, Abolition Day, and Memorial Day. Arbor Day, Lincoln's Birthday, Mothers' Day, Armistice Day, and others, though not legal, were also properly observed.

The usual program for these celebrations consists of recitations, songs, speeches, street parades, short dramas, and concerts.

At the close of the year commencement exercises, which have required unusual significance in the life of the community, were held in all urban centers where classes were graduated.

SCHOOL LUNCH ROOMS

The increase in the number as well as in the popularity of the school lunch rooms, which is known in Spanish as "Comedor Escolar" and which was introduced a few years ago through the initiative of individual teachers with the cooperation of public-spirited men and women, is very encouraging. The school lunch room illustrates the value of private enterprise in introducing supplementary agencies in publicly supported schools.

The "Comedor Escolar" is supported either by private donations, by public funds, or by both combined, as shown in the following statement:

By private donations.....	12
By public funds.....	1
By both private donations and public funds.....	14

This year some school boards have helped to establish school lunch rooms, but in all such cases public funds have been expended in the purchase of the necessary equipment. Better attendance of pupils and a higher grade of individual work in the classroom continue to be two of the most important results secured through this institution.

The sum of \$10,000 has been included in the insular budget to assist school boards in supporting school lunch rooms during the next two years.

The following table presents a detailed statement of leading facts concerning school lunch rooms:

Town.	Number of Comedores Escolares established.	Number of days lunches were served.	Average number of pupils fed each day.	Total cost.	Cost per pupil per day.	Cash balance on hand June 30, 1919.
					<i>Cents.</i>	
San Juan.....	3	140	151	\$936.50	4.4	
Humacao.....	1	140	42	250.00	4.3	\$24.00
Las Piedras.....	1	172	50	324.49	3.8	
Juncos.....	1	150	45	332.65	4.9	99.01
Caguas.....	1	180	75	1,904.16	14.1	900.00
San Lorenzo.....	1	50	38	111.80	5.9	8.20
Salinas.....	1	128	35	224.00	5.0	
Coamo.....	1	94	175	420.50	2.6	179.97
Ponce.....	1	60	25	220.00	14.7	20.00
Peñuelas.....	1	178	16	134.00	4.8	
Yauco.....	1	160	54	889.82	9.6	100.00
San German.....	2	153	93	732.99	5.2	144.37
Anasco.....	1	65	36	206.89	8.8	38.56
Rincon.....	1	96	25	122.18	5.1	64.88
Aguada.....	1	162	20	200.00	6.2	40.00
Lares.....	1	172	50	516.00	6.0	15.00
Aguadilla.....	1	180	170	2,000.00	6.5	
Isabela.....	1	35	15	27.60	5.3	
Utua.....	1	150	70	754.47	7.2	14.66
Arecibo.....	1	146	98	770.67	5.4	182.63
Corozal.....	1	100	20	160.00	8.0	100.00
Bayamon.....	3	130	100	764.00	5.9	100.00
Yabucoa.....	1	172	50	324.49	3.8	
Porto Rico.....	28	* 131	1,457	12,327.21	6.4	2,031.28

* Includes cost of open-air pavilion where lunches are served.

* Average.

SCHOOL LIBRARIES.

School libraries are now maintained in both urban and rural centers. Urban school libraries are established in 57 municipalities and possess a total of 22,299 volumes, of which 1,298 were bought during the past year at a total cost of \$2,294.29, and 429 were received through donations. Rural school libraries are established in 29 municipalities and possess a total of 4,496 volumes, of which 805 were bought during the past year at a total cost of \$260.25.

Not all the books in the libraries are adapted to the needs and interests of school children, but better selections are being made, and all the new books are well chosen, following, as a rule, the Official School Library Guide published by the department. Books and magazines unsuited for school purposes are giving way to more carefully selected modern books. In the large centers pupils have access to public libraries as well, but, unfortunately, these libraries do not contain many books adapted to children. The basis of the school library system is sound and although its extension is slow, it is nevertheless steady. School boards, parents' associations, societies, patrons of the school, and other individuals are aiding the establishment and maintenance of school libraries, and it is hoped that the time is not far distant when every school will have a library, large or small, of its own.

SCHOOL BANDS.

Instrumental music plays an important part in the social life of the people. With counted exceptions every town has its band which plays at all public exercises and gives regular concerts on the plaza. Musicians are therefore in demand and anyone able to play an instrument finds a ready opportunity to earn some extra money. Many pupils have been able to support themselves through school as a result of their musical ability. This fact will in part explain the very prevalent wish on the part of school boards and of the people in general for the establishment of school bands. In addition to the opportunities it affords pupils to earn money, the movement has, of course, distinct educational value.

School bands rendered music at school festivals, school exercises, special concerts given at the school or on the public plaza, at teachers' meetings, at meetings of parent associations, at athletic meets and on other occasions.

School bands are organized in 21 towns. San Juan, besides having a school band, also has a school orchestra.

The following summary gives the present status in regard to these musical organizations:

Towns having organized school bands.....	21
Towns having school orchestras.....	1
Total number of instruments.....	588
Total number of pupils receiving instruction.....	782
Average per town.....	35-
Total amount paid for instructors' salaries.....	\$7,600.00
Average annual salary of instructors.....	\$345.00
Amount spent for material during the year.....	\$414.13

Only five of the bands are uniformed: San Juan, Comerio, Ponce, Yauco, Anasco.

COURSES IN SPANISH FOR AMERICAN TEACHERS.

Aware of the increasing importance of the study of Spanish as a modern language, the department of education planned three courses of instruction, namely, elementary, intermediate, and advanced, for all teachers from the continent employed in Porto Rico. These courses, in scope and thoroughness, are equal to similar courses offered in American colleges and universities. All credits given were granted on a college basis. Only a small percentage of the teachers enrolled received certificates at the end of the year as having successfully passed the final examinations. Certificates were issued as follows: Elementary 5, intermediate 1, advanced 2.

DEPARTMENT PUBLICATIONS.

During the year 1918-19 the department issued 102 circular letters dealing with administrative matters. The following bulletins were published:

El Buen Castellano, Lecciones de Lenguaje, Parte Primera, by Manuel G. Nin.

Syllabus of Work for Candidates for the Principal's License.

Courses of Study for the High Schools of Porto Rico, by Ward C. McCroskey, secretary department of education.

The Porto Rico School Review, published under the auspices of the department of education and the Porto Rico Teachers' Association, was issued monthly during the school year. The Review is favorably recognized as a professional magazine not only in the United States but in Latin American countries as well.

TEACHERS' MEETINGS.

The ever-increasing importance given by the department to the professional aspects of school work in an endeavor to improve the quality and efficiency of instruction is shown by the character and growing number of teachers' meetings held in all districts.

The total number of these meetings reported is 1,030, as against 327 held during the previous year. Of the total, 506 were for urban teachers, 388 for rural teachers, and 136 were of a general character.

The following subjects are illustrative of the practical nature of the topics discussed: How to teach oral English in the primary grades; lesson plans; problem teaching; the teaching of the elementary subjects; motivation of school work; seat work; school hygiene; devices for seat work in the lower grades; teaching of phonics in first, second, and third grades Spanish; physical training; the Zaner system of penmanship; teaching reading and writing Spanish in the first grade; efficiency in teaching; assignment of lessons; general errors in English and how to correct them; home and school garden movement; the teaching of language in the lower grades; professional aspects of teaching English, Spanish, writing, arithmetic, geography, and hygiene. Demonstration classes in the elementary subjects in nearly all grades were given.

In addition to furthering professional advancement, teachers' meetings were used to discuss and encourage patriotic activities such as food conservation, school and home gardens, Red Cross and junior Red Cross work, purchase of Liberty bonds and war savings stamps, and other war subjects.

A general conference of supervisors was held in San Juan during the Christmas vacation.

No funds were available for conducting teachers' institutes of a more formal character with the aid of outside talent.

PROFESSIONAL READING COURSES.

The efforts made by the department of education during recent years to raise the professional standard of teachers by means of well-established and properly organized professional reading courses met this year with positive success. Reports received from all supervisors clearly point out the great improvement brought about in the general attitude and the efficiency of teachers as a result of these reading courses.

The following books were used:

1. For rural teachers: Social Problems in Porto Rico, Fleagle; Jean Mitchell's School, Wray.
2. For urban teachers, from the first to the fourth grade: Motivation of School Work, Wilson and Wilson; A Schoolmaster of a Great City, Patri.
3. For urban teachers from the fifth to the eighth grade: Motivation of School Work, Wilson and Wilson; Education for Character, Sharp.
4. For high and continuation school teachers: Supervised Study, Hall-Quest; Education for Character, Sharp.

Teachers also had easy access to the small professional libraries found in the offices of district supervisors. Many teachers subscribed to leading educational magazines, such as Normal Instructor and Primary Plans, Primary Education, the Elementary School Journal, the Porto Rico School Review.

In most of the districts teachers met weekly for these professional reading courses, and either the supervisor or one of the special teachers of English acted as chairman and instructor.

A certificate was issued to every teacher who successfully completed one of the prescribed courses.

SUMMER SCHOOLS.

Summer schools were conducted by the department of education with the facilities offered by the university at Rio Piedras and Mayaguez, for the purpose of preparing rural, graded, and manual arts teachers. Nevertheless, the supply of teachers secured by this means was far from sufficient to meet the demand. Shortly after the opening of schools new examinations were announced for candidates for rural licenses, but many of the successful ones preferred to remain in school rather than accept positions in distant barrios, where the need of teachers was greatest. The following is a résumé of new teachers added to the profession during the year:

Teachers' licenses issued since July 1, 1918.

Principal's license, by examination, 1919.....	16
English graded, summer course, 1918.....	14
English graded, 4 years' normal course, 1919.....	27
	121
Rural summer course, 1918.....	274
Rural course, University of Porto Rico, January, 1919.....	8
Rural course, University of Porto Rico (Mayaguez) June, 1919.....	18
Rural course, University of Porto Rico (Rio Piedras) June, 1919.....	77
Rural examination August, 1918.....	300
Rural, based on diploma in agricultural science.....	4
	761
Total.....	888

EFFICIENCY RECORDS.

Near the close of each school year teachers in active service are rated according to their efficiency. A modified form of the Boyce score card is used for this purpose. Classifications range from E, the highest rating, to P, the lowest. The licenses of teachers receiving the last-named classification are canceled.

The following is a summary of the classifications made for the school year 1918-19:

Classification.	Urban teachers.	Rural teachers.	Total.
E (excellent).....	209	16	225
G (good).....	974	1,023	1,997
F (fair).....	58	428	486
P (poor).....		270	270
Unclassified.....	98		98
Total.....	1,339	1,737	3,076

PRIVATE SCHOOLS.

Reports received from supervisors indicate that last year there were 60 private schools in Porto Rico, 21 of them in San Juan. The grade of work offered ranges from kindergarten to high-school instruction, but there are only 4 private secondary schools.

The length of the school year is 10 months and 219 teachers were employed. Twenty-five schools followed the official course of study for the common schools as outlined by the department of education.

Some of the schools reported as kindergarten in reality are in the nature of the dame schools of colonial times.

The enrollment was 5,722 as against 7,248 for the previous year. See Table VIII for details.

SUMMARIZED STATEMENT OF SCHOOL BUILDINGS AND SITES.

1. Total number of buildings completed during the year:
 - (a) Urban: Six buildings with 25 rooms, including a 3-room building in Luquillo and an 8-room building in Fajardo donated by Dr. Santiago Veve.
 - (b) Rural: Fourteen buildings with 21 rooms.
2. Total number of buildings commenced during the year and now in course of construction:
 - (a) Urban: Five buildings with 30 rooms.
 - (b) Rural: Eleven buildings with 11 rooms.
3. Total number of building projects, commenced in previous years and in course of construction during the present:
 - (a) Urban: Eight buildings with 36 rooms, including a 2-room building in Ceiba donated by Dr. Santiago Veve.
4. Total number of sites acquired during the course of the year:
 - (a) Urban: Seven sites.
 - (b) Rural: Nineteen sites.
5. Special enumeration of sites donated to school boards:
 - (a) Urban: Guainabo, 1 site by Saturnino Fernandez.
 - (b) Rural: Río Piedras, 1 site by Angel Barcarruel; Carolina, 1 site by Loiza Sugar Co.; Loiza, 1 site by Eduardo J. Gonzalez; Luquillo, 1 site by Dr. Santiago Veve; Caguas, 1 site by Benito Diaz Lopez; Naranjito, 1 site by Vicente Cruz Allice; Barros, 1 site by Juan B. Latorre; Moca, 3 sites by Juan Nepomuceno Laguerre, Toribio Lassalle Bourdon and Ramon A. Vera, respectively; Vega Baja, 1 site by The Columbo Co.; Morovis, 1 site by Francisco Rivera.
6. Towns in which no school buildings of any kind have been erected since the American occupation:
 - (a) In urban centers: Ceiba, Juncos, Jayuya, Barceloneta, Morovis, Dorado, and Guainabo.
 - (b) In rural districts: Loiza, Fajardo, Luquillo, Hormigueros, and Rincon.

EFFECTS OF EARTHQUAKES ON SCHOOL WORK.

On October 11, 1918, Porto Rico was visited by a sudden calamity, which greatly interrupted school work not only in the localities where its effects were most direct, but practically throughout the whole island. At 10.12 a. m. of that day there was felt a terrible earthquake shock, the severest in Porto Rico's history, a shock, which caused great destruction of property and some loss of life, especially on the western coast. The municipalities more directly affected were Aguadilla, Aguada, Anasco, and Mayaguez. Aguadilla and Mayaguez suffered greatly from the accompanying tidal wave. Not only were schoolhouses as well as other buildings in these cities completely wrecked, but the population as a whole was so terrified that even in municipalities where buildings had not been injured parents refused to send their children to school for fear that repeated shocks might bring about the same loss of life and property as had been caused in Aguadilla, Anasco, and Mayaguez.

The commissioner of education visited the stricken district on the day following the disaster in order to get a personal estimate of the extent of the damage, to give much needed encouragement, and to render such assistance as was in his power in the matter of organizing relief work.

It required patient urging on part of teachers to secure the return of children to school. But hardly had this been done when the epidemic of influenza swept over Porto Rico and for a time necessitated closing the schools altogether.

In order to set forth in greater detail the losses suffered by the schools through the earthquakes they are given by municipalities as follows:

Adjuntas.—The Irving School was cracked; not dangerously so, but parents positively refused to send their children until the school board had made certain repairs.

Aguada.—Though practically every other building of masonry, including the large church, was completely wrecked, the injuries to the Narciso Gonzalez Font School were not so serious as might have been expected. For a time classes were organized in private residences, granted without compensation, until the school building had been repaired by the board.

Aguadilla.—The Fort, a Federal building in which the high school was located, was completely wrecked. Teachers and students escaped by jumping from the second story or by means of the bell rope. Twenty students were injured.

Shortly after the first shock a tidal wave swept over the lower part of the city carrying with it houses, vegetation, men, women, and children. A lowland not far from town called "Bajura de Vadi" is now known as the "Valley of Death" on account of the many victims caused by the sea.

Classes were interrupted, for there was only one building which could be used for school purposes. Tents were made during the week from October 14 to 18. During this time teachers were busy doing Red Cross work. On October 21 teachers went back to their duties, but only a few pupils appeared, due to the nervous strain caused by repeated earthquakes which were felt from time to time.

On Thursday evening, October 24, a second severe shock occurred. The result was a great panic. The city was abandoned; families fled to the country, thinking that the sea would again flood the city. Next Friday morning not one of the pupils came to class. Their parents would not let them go.

For some weeks school work went on with a very poor attendance. Later the influenza appeared, and the schools had to be closed until January 7.

The work of the school board, the supervisor of Aguadilla, and teachers, assisted by public-spirited and generous citizens, in re-establishing the schools, deserves the highest praise. For a time certain schools were conducted in the open air under tents until provision was made for housing them in buildings which were granted by citizens without any cost to the board.

Anasco.—The Hostos and Ramirez de Arellano Schools were damaged so seriously as to make them unfit for use, and a rented building that housed the continuation school was destroyed. Amongst the persons killed was Mr. Ramón Laviosa, treasurer of the school board, who was at his post of duty in the town hall when the building collapsed completely. That no school children were killed or seriously injured was due to the good work of teachers in preventing a panic. The school board of Anasco erected a temporary frame building on the plaza at a cost of \$3,500 for installing the schools, but this building had not been completed when it was seized by the department of health and converted into a hospital for influenza patients. The work of the school board, the supervisor of schools, and teachers in bringing about normal school conditions out of the prevailing chaos, and especially in the matter of assisting, feeding, and caring for the sick and injured, is highly commendable.

Arecibo.—Though other buildings, including the city hall and the church, were seriously affected by the earthquakes, the high school and Jefferson School suffered no material damage. Lincoln School, however, had to be vacated for a time until extensive repairs were made by the school board from their own resources.

Coamo.—De Hostos and Franklin Schools were made unfit for use as a result of the earthquakes, but repairs were made by the school board from their own funds.

Fajardo.—The Columbia and Belaval Schools were damaged considerably, but repairs were effected at once by the school board from their own funds.

Humacao.—The Ponce de Leon Building received minor injuries that were repaired by the school board from their own funds.

Guayanilla.—The Luis Muñoz Rivera School was so badly injured that the school board was compelled to rent a temporary building in which to house the schools while extensive repairs were made on this building.

Juana Díaz.—The injury to the Manuel Fernandez Juncos School was slight. Repairs were promptly made by the school board.

Lares.—The Clay School was badly damaged and requires extensive repairs to make it safe.

Mayaguez.—The third city of Porto Rico in population and once the commercial metropolis suffered most severely from the earthquakes and tidal waves. The havoc wrought and the number of people killed were far greater than in any other municipality. The Catholic Church on the plaza, the city hall, the courthouse, the custom-house, the post office, banks and other business houses, and many handsome private residences were reduced to ruins in a few seconds with the ensuing terror and panic.

Graded School No. 11, also known as the Playa School, a cement block structure, was completely destroyed. The Rio Hondo, Lincoln, Carbonell, and Freyre Schools, which were cement block rural buildings, were totally wrecked. The Roosevelt School, consisting of 10 rooms, installed in a Federal Government building, was badly injured. The Degetau Hall of the College of Agriculture and Mechanic Arts, which was the largest and best building of the college, was destroyed as a result of a fire that was started immediately after the shock, due to an explosion of chemicals in the laboratories. The present cost of replacing this building and its equipment is close to \$100,000. The laboratories lost were undoubtedly the best in Porto Rico. The Mayaguez High School and Grammar School buildings, which were constructed in recent years of reinforced concrete, suffered little damage. Several of the partition walls were cracked causing the blackboards to fall, but the principal walls did not receive any injury. The administration building intended for the offices of the supervisor, school board, and public library was in course of construction at that time and did not receive any injury, undoubtedly due to the fact that the material used was reinforced concrete.

When Playa School collapsed six persons were killed: Miss Emilia Irrizary, one of the teachers, a janitress, and four school children.

The schools remained closed for about two weeks, as the quakes continued at intervals during the week from October 11 to October 18. On the third week after the first quake schools reopened, but were again deserted by the pupils because of the severe

shock felt on October 24. Work was resumed the fourth week after the first quake, to be interrupted again shortly thereafter by the epidemic of influenza.

Fortunately, the financial condition of the Mayaguez school board made it possible to replace the buildings lost at once. Frame structures were erected in place of the Rio Hondo, Lincoln, Carbonell, and Freyre Schools; a temporary frame building was erected in the Playa; and the Roosevelt Building was repaired promptly. These measures were due to the activity, interest, and public spirit displayed by the school board, whose work in this connection deserves the highest praise. Special mention should also be made of the relief work done by the supervisor and teachers which was made necessary by the epidemic of influenza, following shortly after the earthquakes.

Moca.—The upper story of the Francisco Mariano Quiñones School, a concrete structure, was destroyed, but part of the building can be repaired so as to be utilized.

Ponce.—No school building was destroyed, but the Baldorioty and McKinley Schools received injuries of a nature so serious as to make them dangerous. These buildings require extensive repairs. The high school and grammar school were damaged to a much less extent and were promptly repaired by the school board from their own funds.

San Juan.—The Central High School occupied the former Las Palmas Hotel in Santurce. This building for some years had not been fit for use, but no other was available. The earthquake shattered it so badly as to render it entirely unsafe. School work was interrupted for a week, during which time the Central Grammar School was transferred from the "Barracones" in Puerta de Tierra to the new and handsome Baldorioty de Castro Graded and Technical School, which was nearing completion. The Central High School is now temporarily housed in the "Barracones," though certain ninth-grade groups have been installed in the Labra School, Santurce, and in the Baldorioty de Castro School, San Juan. The injury to other school buildings in this city was slight.

San German.—The Antonia Martinez School, which was the only public-school building in Porto Rico when the change of sovereignty occurred, was wrecked, making it unfit for use. The first story can be repaired so as to make this part of the building available in the future. The Longfellow School also received serious injuries. School work, however, was not stopped because of these losses. The schools were temporarily housed in other buildings and the work was continued, though under adverse conditions.

Sabana Grande.—The Cooper School was seriously damaged, rendering the building unfit for use until repaired.

THE EFFECTS OF THE INFLUENZA.

Shortly after school work had been seriously interrupted through the earthquakes the influenza broke out and soon extended all over Porto Rico, making it necessary for schools to be closed in the several municipalities as the epidemic spread. Finally it became necessary to close all schools with the exception of the College of Agriculture and Mechanic Arts, at Mayaguez. Both the earthquake and the influenza had disastrous effects upon the official records of enrollment and attendance, and this circumstance should be taken into consideration in passing judgment on the figures presented in the statistical tables. Because of the lack of nurses and general care for the sick, the public-school teachers were called upon to render such assistance as they could. They responded in loyal fashion almost without exception and cooperated with the local Red Cross committees in the humanitarian work of nursing and feeding the sick.

In some municipalities, at least, friction resulted between the health and school authorities through the seizure of school buildings for temporary hospitals by the department of health. School boards objected strenuously to this procedure, and only after consultation with the insular authorities did they consent to give up school buildings for hospital purposes when it had been agreed that these buildings were to be returned in the same good condition in which they were found. As these buildings were being vacated numerous complaints were received by the department to the effect that they were not being returned to the local school authorities in the same condition in which they had been surrendered. On the other hand, the department of health argued that school authorities were demanding more in the way of painting and repairs than was reasonable. The whole subject was so acute that the legislature enacted a law to the effect that in the future the department of health can not seize school buildings for hospital purposes unless the previous written consent of the school authorities is given.

LEGISLATION.

During the second regular session of the Ninth Legislature of Porto Rico the following bills and joint resolutions affecting public education were enacted into laws:

ACTS.

An act to amend section 1 of act No. 62, entitled "An act to create a pension fund for the teachers of Porto Rico, and for other purposes," approved December 5, 1917.

An act to promote the education of illiterate children and adults.

An act to amend sections 40, 43, and 55 of the school law.

An act to determine the equivalence of a diploma of principal teacher, and for other purposes.

An act to establish elementary night schools in the rural districts of Porto Rico, and for other purposes.

An act to designate the first Sunday of the second month of the school course of each year as "Teachers' Day," and for other purposes.

An act for the construction of a schoolhouse in the municipality of Adjuntas and appropriating funds for such purposes.

An act to provide for the construction of a high-school building in Caguas, and for other purposes.

An act appropriating the sum of \$35,000 for rebuilding and equipping a building devoted to the teaching of agriculture in the Mayaguez College of Agriculture and Mechanic Arts, and for other purposes.

An act to amend section 1 of joint resolution No. 20, approved November 30, 1917, "To reimburse the school board of Ponce for satisfaction of a judgment."

An act creating scholarships to send four-year high-school graduates to study in schools of arts and trades in the United States, and for other purposes.

An act to provide for the construction of a graded-school building in the town of Juncos, appropriating the sum of \$40,000 therefor, and for other purposes.

An act to authorize and empower the commissioner of education to establish in the high schools training courses for rural teachers, and for other purposes.

An act authorizing the school board of Guayama to levy an additional tax on real and personal property during such fiscal years as may be necessary for the purpose of carrying out the construction of a school building.

An act authorizing the school board of San Lorenzo to levy an additional tax on real and personal property during such fiscal years as may be necessary for the purpose of carrying out the construction of a school building.

An act providing that before using school buildings for hospitals the written consent of the school boards and of the commissioner of education shall be obtained.

An act authorizing the school board of Cabo Rojo to levy an additional tax on real and personal property during such fiscal years as may be necessary for the purpose of carrying out the construction of a school building.

JOINT RESOLUTIONS.

Joint resolution to remedy in part the losses caused youths who, on being discharged from the army, must continue their studies in the colleges of Porto Rico, and for other purposes.

Joint resolution to provide for the payment to certain public-school teachers of a certain amount of money accruing to them as pensions on retirement, and for other purposes.

Joint resolution authorizing the treasurer of Porto Rico to transfer the funds of the extinguished corporation "La Egida del Maestro" to the "Teachers' pension fund."

BUDGET.

The educational budget for the ensuing biennium is the largest in the history of Porto Rico, amounting to \$2,362,653.25 per year. This figure represents an increase of \$644,693.25, or 37.3 per cent over the budget of the year just closed, and does not include appropriations made for the support of the university or for the erection and repair of buildings. This increase is largely accounted for by an increase of teachers' salaries, which have not been as liberal as the teachers had expected, nor do the salaries under the new schedule compare favorably with those paid in the United States. The school term is 10 months. Rural teachers will receive a salary of \$540, or an increase of 37.5 per cent; graded teachers, \$720, or an increase of 20 per cent; principals and teachers of English, \$900, or an increase of 20 per cent; continuation teachers, \$900, or an increase of 12.5 per cent.

The number of teaching positions provided for is as follows: Twenty principals; 150 teachers of English; 1,120 graded teachers; 1,700 rural teachers; 40 special teachers of agriculture; 20 special teachers of needlework and embroidery; 11 special teachers of music, drawing, and physical education; 1 special teacher for the blind; and 108 high-school teachers. The total number of positions made available is 3,230, the largest in the history of the department. It will not be possible to fill all these positions, particularly in high-school and special work, because a sufficient number of properly qualified teachers can not be found at the salaries offered.

NEW MUNICIPAL LAW.

Under the reorganization of the municipal government made by the legislature, school boards are abolished altogether, and in place thereof there is provided a municipal commissioner of education, who will have all the powers and duties formerly exercised by school boards except the voting of the school budget. He will receive a regular salary for his services. Under this new arrangement there will be a business manager for the schools of each municipality, the municipal commissioner of education, and a professional head, the supervisor of schools.

RECOMMENDATIONS.

1. In view of the readjustments of the school curriculum which are now under way in many systems of the United States, the course of study for the public schools should be changed from its present division, comprising an elementary school with eight years of instruction and a high school with four, to a uniform elementary course of six years, followed by a diversified intermediate course of three years and a further diversified high-school course of three years. In other words, the present 8-4 plan should be changed to a 6-3-3 plan. This proposed arrangement would result in greater economy in elementary school expenditures, and at the same time those pupils who are able to continue their studies would have the benefit of diversified courses adapted to their future needs. Although the commissioner of education is authorized by law to establish a public-school system, the proposed changes can not be made without corresponding changes in the insular budget, providing for classification and salaries of teachers.

2. A further liberal increase in teachers' salaries is urgently needed for all classes, but particularly for certain special teachers, such as teachers of English, manual training, home economics, agriculture, and of all high-school subjects. Under the salary scale adopted for the fiscal year 1919-20 the department has not been able to secure teachers in numbers sufficient to fill all these positions, in spite of earnest and persistent efforts. In the case of teachers coming from the United States, ample provision should be made for their traveling expenses in addition to a remuneration sufficient to enable Porto Rico to compete with the States in securing teachers with high qualifications.

3. In order that the teaching of English may be promoted in proportion to the importance of this language for the rising generation a far larger number of teachers are needed with liberal remuneration in order to insure longer terms of service.

4. The positions of special supervisors of physical education, music, and drawing that existed some years ago should be restored in order that these subjects may have the benefit of expert direction. The need of giving far greater emphasis to physical education has been shockingly revealed through the examination of recruits for the military service. This subject can not be ignored by the people of Porto Rico on the ground of economy or lack of funds. The welfare and happiness of the people are too intimately related to their health and physical well-being to permit that this vital subject should be neglected.

5. The material resources of the people of Porto Rico are not sufficient to extend and support the present school system in a manner adequate to solve fully their educational problems. The great defect of the system is insufficiency of schools rather than deficiency of organization and method. More schools, installed in better buildings specially constructed and provided with modern furniture and equipment require the expenditure of money that is not and will not be available from insular revenues for many years to come. Porto Rico's only hope is to secure Federal aid for the extension and support of public education. Now that the subject of Federal aid to the States is receiving the attention of Congress it is vitally important that the American citizens of Porto Rico should not be overlooked.

6. There is perhaps no State in the Union where vocational education is so necessary as in Porto Rico. The Federal vocational education act is not made applicable to Porto Rico. This act should be extended to Porto Rico or else provision should be made for aid to vocational education in a general act of Congress providing assistance from the Federal Government.

TABLE I.—*Directing and supervising officers, 1918-19.*

Paul G. Miller, commissioner of education.
 Carey Hickle, assistant commissioner.
 Ward C. McCroskey, secretary and chief, division of supervision and records.
 Geo. H. Harriman, chief, division of property and account.
 A. Gonzalez Font, chief, division of school board accounts.
 Francisco Vizcarrondo, general superintendent.
 Joseph C. Morin, general superintendent.
 José González Glinorio, general superintendent of Spanish.

Geo. C. Ure, supervisor of manual arts.
 A. J. Sykes, supervisor of agriculture.
 Grace J. Ferguson, supervisor of home economics.

University of Porto Rico.

Paul G. Miller, chancellor.
 Ralph S. Garwood, dean, College of Agriculture and Mechanic Arts, Mayaguez.
 Chas. W. St. John, dean, Río Piedras departments.

SCHOOL DISTRICTS AND SUPERVISORS.

San Juan..... Geo. V. Keelan.
 Río Piedras-Trujilla Alto. Cecil E. Stevens.
 Carolina..... Beatriz Lassalle.
 Río Grande-Loiza..... Eugenio Vivas.
 Fajardo-Ceiba-Luquillo..... Samuel D. W. Mills.
 Humacao-Vieques..... Valeriano Flores.
 Naguacabo-Las Piedras..... Marshall D. Rice.
 Yabucoa-Maunabo..... Bernardo Huyke.
 Arroyo-Patillas..... Harold S. Corlett.
 Juncos-Gurabo..... Celestino Benitez.
 Caguas-San Lorenzo..... Gerardo Sellés y Solá.
 Guayama..... Servando Rabalanne.
 Salinas-Santa Isabel..... Stella Marquez Morales.
 Cayey-Cidra..... Alan H. Lynch.
 Comerio-Aguas Buenas-
 Naranjito..... Oscar Porrata.
 Albonito-Barranquitas..... J. B. Fontanes.
 Barros..... Claude S. Field.
 Coamo..... Facundo Sanchez.
 Juana-Diaz-Villalba..... Zolito Gracia.
 Ponce..... John P. Blanco.
 Guayanilla-Penuelas..... Hatuey Díaz Baldorioty.

Yauco-Guanica..... Charles E. Miner.
 San German - Sabana Grande..... Judson U. McGuire.
 Cabo Rojo-Lajas..... William F. Littlefield.
 Mayaguez-Hormigueros..... Luis A. Irizarry.
 Maricao-Las Marias..... Francisco Garcia.
 Anasco-Rincon-Aguada..... Pedro P. Arán.
 Lares..... Rafael A. Segarra.
 San Sebastian..... Pedro A. Cebollero.
 Aguadilla-Moca..... Santiago Vevé, jr.
 Isabela-Quebradillas..... Carlos Rivera Ufret.
 Utuado..... José C. Rosario.
 Adjuntas-Jayuya..... Luis Padilla.
 Camuy-Hatillo..... Juliet A. Casey.
 Arecibo..... Manuel G. Nin.
 Manatí-Barceloneta..... Daniel F. Lynch.
 Ciales..... Julio B. Ortiz.
 Vega Baja-Vega Alta..... Victor M. Suarez.
 Corozal-Morovis..... Francisco Gatzmabide.
 Toa Alta - Toa Baja-
 Dorado..... José Vazquez Ortiz.
 Bayamon-Guanabaco..... Manuel Negrón Collazo.

HIGH-SCHOOL PRINCIPALS.

San Juan..... J. B. Hagberg.
 Ponce..... Florence Sprague.
 Mayaguez..... Sara M. Williams.
 Arecibo..... J. H. Axtmayer.
 Humacao..... A. E. E. Herger.
 Fajardo..... Antonio C. Clavell.

Caguas..... Ethel R. S. Fonda.
 Guayama..... George S. Hennessy.
 Yauco..... Pedro Gil.
 Aguadilla..... Carmen Gómez.
 Bayamon..... Althea S. Bunting.

SCHOOL BOARDS, 1918-19.

Adjuntas:
 Juan Aparicio Rivera, president.
 Eduardo Capó Cintrón, secretary.
 Pablo Font, treasurer.

Aguada:
 Luis Vadi Santoni, president.
 Juan Rivera Gómez, secretary.
 Francisco Moret, member.
 Pedro Badillo, treasurer.

Aguadilla:
 Buenaventura Jiménez, president.
 José Ferrari, secretary.
 Alberto Esteves, member.
 Francisco Gonzalez, treasurer.

Aguas Buenas:
 Enrique Lizardi Colón, president.
 Crispulo Morales Díaz, secretary.
 Guillermo Camacho, member.
 Secundino Merced, treasurer.

Albonito:
 Andres A. Ortiz, president.
 Antonio Torres, secretary.
 Angel de la Cruz, treasurer.

Asasco:
 Rafael Arrillaga, president.
 Manuel Garcia de Quevedo, secretary.
 Emilio Ruiz de Porras, member.
 Antonio N. Velasco, treasurer.

Arecibo:
 Angel Mattel Rodríguez, president.
 Ramon Pérez Pérez, secretary.
 Gustavo Zeno Sama, member.
 Baltasar Corrada, treasurer.

Arroyo:
 Jaime Santiago, president.
 José González, secretary.
 José de Choudens, member.
 Jacinto G. Doelter, treasurer.

Barceloneta:
 José Alonso del Olmo, president.
 Cruz Alegria, secretary.
 Ramón Martínez Tirado, member.
 Rafael Báez Infante, treasurer.

Comerio:
 José C. Díaz, president.
 Manuel A. Pérez, secretary.
 Manuel Martorell, member.
 José Cruz, treasurer.

Corozal:
 A. Bou de la Torre, president.
 Tomás Maldonado, secretary.
 Genaro Bou, member.
 Ramón Rivera, treasurer.

Dorado:
 Ramón Nevarez, president.
 Alfredo López, secretary.
 Policarpo Marrero, member.
 Pedro López, treasurer.

Fajardo:
 Luis de Celis, president.
 José Vidal Planellas, secretary.
 Ramón Rodríguez Alberty, member.
 Agustín Camuñas, treasurer.

Guanica:
 Pedro Nieves, president.
 Ramón Nazario, secretary.
 Rogelio Acosta, member.
 P. Vargas Rodríguez, treasurer.

Guaynabo:
Narciso Vall-Ilobera, president.
Rogelio García, secretary.
José Julio Morales, member.
Francisco Monge, treasurer.

Guayama:
Francisco G. Bruno, president.
Joaquín Rovira, secretary.
Luis Texidor Ortiz, member.
Julio Lectora, treasurer.

Guayanilla:
Benigno Dávila, president.
Tomás A. Pacheco, secretary.
Ulises del Rosario, member.
Joaquín F. Torres, treasurer.

Gurabo:
Matías González, president.
Norberto Dávila Nieves, secretary.
Juan Martínez Márquez, member.
Gustavo Quiñones, treasurer.

Hatillo:
Fructuoso Arana Ríos, president.
Alfredo Salazar, secretary.
Fernando Velázquez, member.
Pedro J. Navas, treasurer.

Hormigueros:
Felipe Cruz Irizarry, president.
Miguel Salgado, secretary.
Adolfo Henry, member.
José Ramírez Avilés, treasurer.

Barranquitas:
Arturo Umpliere, president.
Miguel Colón, secretary.
Manuel Torres Aponle, member.
José B. López, treasurer.

Barros:
Manuel Pujadas Díaz, president.
Rafael Morales, secretary.
Artemio Alvarado Rivera, member.
Oscar Guerrero, treasurer.

Bayamon:
Manuel Tossas, president.
José Gándara Córdova, secretary.
Thomas Angay, member.
Luis G. Hernalz, treasurer.

Cabo Rojo:
Félix Viélla Vélez, president.
Gavino Genllanis, secretary.
Manuel Montalvo Colberg, member.
Abigail Crespo, treasurer.

Caguas:
José J. Alvarez, president.
Modesto Aguayo, secretary.
Miguel F. Chiques, member.
Juan M. So'á, treasurer.

Camuy:
Juan N. Miranda, president.
Francisco Nolla, secretary.
José P. Rodríguez, member.
Ramon Estrella, treasurer.

Carolina:
Ramón García Mujica, president.
F. Esteban Vargas, secretary.
Arturo Hernandez, member.
Francisco García, treasurer.

Cayey:
Luis Antonio Ortiz, president.
Miguel García Méndez, secretary.
Isidoro A. Baldrich, member.
Agne lo Castillo, treasurer.

Celba:
Felicidad Quiñones, president.
Aure lo Rivera, secretary.
Miguel Saavedra, member.
Cruz Pacheco Ruiz, treasurer.

Clares:
José P. Santiago, president.
Pablo Hernandez, secretary.
Antonio Rivera Pérez, member.
Manuel Rivera Pérez, treasurer.

Cidra:
Angel M. Díaz, president.
Basilio Nieves, secretary.
Práxedes Santiago Alonso, member.
Manuel Vazquez, treasurer.

Coamo:
Hermínio W. Santaella, president.
José Baerga, secretary.
Ernesto A. López, member.
José Picó Matos, treasurer.

Humacao:
Juan B. Cruz, president.
Salvador L. Rocafor, secretary.
Francisco Isern Jiménez, member.
Luis F. Sanchez, treasurer.

Isabela:
Félix Juarbe, president.
Ramón Banuchi, secretary.
José E. Muñoz, member.
Leopoldo González, treasurer.

Jayuya:
Cándido González, president.
Eutimio Rivera, secretary.
Heracilio Medina, member.
S. Alvarez Colón, treasurer.

Juana Díaz:
Lorenzo J. Dávila, president.
Virgilio Torres, secretary.
Pedro Millán, member.
Delfín Colón Torres, treasurer.

Juncos:
Félix Rexach, president.
Narciso Varona, secretary.
José Maldonado, member.
Luis J. Mejías, treasurer.

Lajas:
Modesto Vélez, president.
José A. Morales, secretary.
Juan Ortiz Toro, member.
Jeronimo Irizarry, treasurer.

Lares:
Bernardino Vázquez, president.
José D. Rodríguez, secretary.
Francisco Acevedo, member.
V. Borges Ortiz, treasurer.

Las Marias:
Julio Vincenty, president.
Eustaquio Gastambide, secretary.
Maximino Lacourt, member.
Andrés Lavergne, treasurer.

Las Piedras:
José Collazo, president.
Casimiro Márquez Díaz, secretary.
Cristobal Bregón, member.
José Márquez Rodríguez, treasurer.

Loiza:
José María Ríos, president.
J. Ramón Calderón Novoa, secretary.
Rafael Soegaard, member.
C. García de la Noceda, treasurer.

Luisquillo:
Fmilio Román, president.
Juan Velez, secretary.
Fmilio Román, member.
Rafael N. Coca, treasurer.

Manatí:
Alejandro Otero López, president.
Justino Crespo García, secretary.
Félix R. Muñoz, member.
Basilio Vélez, treasurer.

Maricao:
Américo Feda, President.
J. Andrés Massari, secretary.
Tomás Oramas, member.
Antonio Carrera, treasurer.

Maunabo:
Arturo Machicote Ferrer, president.
Julio Ortiz Rivera, secretary.
Agustín Baduy, member.
Manuel Ortiz Suva, treasurer.

Mayaguez:
Manuel Marín, president.
Manuel Guzmán Rodríguez, secretary.
Pedro Perea, member.
T. Ramirez Cuerda, treasurer.

Moca:
José C. Lassalle, president.
Higinio López Soto, secretary.
Alcides Babilonia, member.
Anacleto L. Colfesi, treasurer.

Morovis:
Tadeo Charneco Ruiz, president.
José Vallines Collazo, secretary.
Casimiro Rosado, member.
S. Cordero Ayala, treasurer.

Naguabo:
Francisco Cordero, president.
Ramón Herrero, secretary.
Luis Dipini, member.
A. López Fauct, treasurer.

Naranjito:	San Sebastian:
Miguel Rivera Rivera, president.	Joaquin Oronoz, president.
Alfredo Archilla, secretary.	Antonio Sagardia, secretary.
José R. Díaz, member.	Marcelino Vivas, member.
Manuel V. Rivera, treasurer.	Juan B. Angulo, treasurer.
Patillas:	Santa Isabel:
José R. Díaz, president.	Santiago C. Delpin, president.
José Hueto, secretary.	Fortunato Blanco, secretary.
Jesus M. Márquez, treasurer.	Pastor Díaz Molinari, member.
Pefíuelas:	Juan J. Blanco, treasurer.
Gabino Balasquide, president.	Toa Alta:
José Valedón, secretary.	José Miranda, president.
Ramón Carlos Pérez, member.	Emilia T. de la Torre, secretary.
Antonio Bauzá Alvarado, treasurer.	Severo San Inocencio, member.
Ponce:	J. de la Torre Muñiz, treasurer.
Antonio Toro Albizu, president.	Toa Baja:
José Alcalá, secretary.	Emilio Ortis, president.
Rafael Pérez Mercado, member.	Augusto Salgado, secretary.
Luis Vivas, treasurer.	Antonio Sosa, member.
Quebradillas:	Luis M. Santiago, treasurer.
Arturo Umplierre, president.	Trujillo Alto:
José Amador, jr., secretary.	Ramón Díaz, president.
Ramón A vila, member.	Juan Rivera, secretary.
Francisco López, treasurer.	Manuel Hernandez Carazo, member.
Rincon:	J. Viera Pereira, treasurer.
Juan Arroyo Manzanares, president.	Utuado:
Luis Beltrán Acevedo, secretary.	Antonio Serbiá, president.
Gumersindo Ruiz, member.	Juan Maldonado, secretary.
Ramón Font, treasurer.	Jesse R. Buterhough, member.
Rio Grande:	Ramón Jiménez, treasurer.
Luis C. Boneta, president.	Vega Alta:
Carlos S. Quiñones, secretary.	Emilio Escalera, president.
José S. Rodríguez Hernandez, member.	Simplicio Santos, secretary.
F. Rodríguez Robert, treasurer.	José Calderón, member.
Rio Piedras:	Andrés Sandín treasurer.
Ramón Villá Mayo, president.	Vega Baja:
Luis Gonzalez Cabrera, secretary.	José Otero Franqui, president.
J. Villá Mayo, treasurer.	Ernesto Diaz Arana, secretary.
Sabana Grande:	Antonio Jimenez, member.
Joaquin García, president.	Ramón Torres, treasurer.
Hermínio García, secretary.	Vieques:
Enrique Lassise, member.	Pedro Peterson, president.
D. Rodríguez Carlo, treasurer.	Santos Martínez, secretary.
Salinas:	Tomás Jurant, member.
Francisco Secola, president.	José Luján, treasurer.
Manuel Iglesia, secretary.	Villalba:
Eugenio Torres, member.	Teodoro Alonzo, president.
Luis Colón Delfí, treasurer.	Eladio Burgos, secretary.
San German:	Felipe Colón, member.
Aurelio García Yanguas, president.	Ermelindo Bracety, treasurer.
José M. Ortiz, secretary.	Yabucoa:
Abraham Toro Nazario, member.	Francisco Valdejuoli, president.
R. García Cabrera, treasurer.	Luis R. Casanova, secretary.
San Juan:	Victor Santos, member.
José Gómez Brioso, president.	José J. Alvarez, treasurer.
José Bazán, secretary.	Yauco:
Wenceslao Escobar, member.	Nicanor Rodriguez, president.
E. Rodríguez Suarez, treasurer.	Dulcidio Perez, secretary.
San Lorenzo:	Manuel Serra Ortiz, member.
Pedro Parrilla, president.	Antonio Automattel, treasurer.
Manuel Gutierrez, secretary.	Culebra:
Juan Sellés, jr., member.	Tiburcio Gonzalez, president.
Juan Selles Mejías, treasurer.	Modesto Romero, secretary.
	Anastasio Nieves, member.

TABLE II.—Summary of statistics for the school year 1918-19.

Number of different pupils enrolled in all publicly supported schools, classified by color and sex:

White—	
Male.....	71,417
Female.....	55,537
Total.....	126,954
Colored—	
Male.....	18,575
Female.....	15,265
Total.....	33,840
White and colored—	
Male.....	89,992
Female.....	70,802
Total.....	160,794

Number of different pupils enrolled in each kind of school:

High schools.....	2,622
Continuation schools.....	943
Total secondary schools.....	3,465
Elementary urban schools.....	54,422
Rural schools.....	97,985
Night schools.....	2,302
Total in schools under the department.....	158,474

Number enrolled in the University of Porto Rico:

Rio Piedras department—	
College of Liberal Arts.....	30
College of Law.....	33
College of Pharmacy.....	19
Normal department.....	245
College specials.....	22
High schools.....	136
High-school specials.....	9
Elementary practice school.....	309
Total.....	903

College of Agriculture and Mechanic Arts, Mayaguez—

Collegiate—	
Agriculture.....	35
Engineering.....	9
Sugar chemistry.....	12
Freshmen.....	62
Special.....	16
Total collegiate.....	134
Subcollegiate—	
Agriculture.....	24
Polytechnic.....	88
Total subcollegiate.....	112
Rural teachers' course.....	127
Total, Mayaguez.....	373

Total in the University of Porto Rico.

Summer school—	
Rio Piedras.....	439
Mayaguez.....	54
Total.....	493

Number enrolled in charitable and correctional schools.

Total.....	651
------------	-----

Total enrolled in all public schools

Number enrolled in private schools.....	180,794
Total.....	5,722

Total enrolled in all schools in Porto Rico.

Average number belonging in public schools:	186,516
---	---------

University of Porto Rico.

High schools.....	1,573
Continuation schools.....	2,258
Total.....	741

Total secondary schools.

Elementary urban schools.....	2,990
Rural schools.....	48,503
High schools.....	81,963
Total.....	2,302

Total.

Total.....	137,353
------------	---------

Average daily attendance in public schools:

University of Porto Rico.....	1,447
-------------------------------	-------

High schools.

Continuation schools.....	1,991
Total.....	633

Total secondary schools.

Elementary urban schools.....	2,632
Rural schools.....	44,879
Night schools.....	70,605
Total.....	1,622

Total.

Total.....	121,176
------------	---------

Length of school year, 40 weeks or 197 days, exclusive of holidays; in night schools, 12 weeks; in university, 36 weeks.

Number of teachers (teaching positions):

White—	
--------	--

Male.....	732
-----------	-----

Female.....	1,642
-------------	-------

Total.....	2,372
------------	-------

Number of teachers (teaching positions)—Continued.

Colored—	
Male.....	216
Female.....	396
Total.....	612
White and colored—	
Male.....	948
Female.....	2,036
Total.....	2,984
Teachers in university.....	82
Teachers in high schools.....	80
Teachers in continuation schools.....	66
Teachers in elementary urban schools.....	1,108
Teachers in rural schools.....	1,622
Special teachers.....	8
Teachers paid by school boards.....	18
Total.....	2,984
Teachers in private schools.....	219
Total teachers in Porto Rico.....	3,203
Number of buildings in use for the schools during the year:	
Owned by The People of Porto Rico.....	529
Rented.....	1,195
Net value of all school-board property, real and movable.....	\$3,273,704.46
Estimated value of all publicly owned school buildings.....	2,420,361.16
Rental value of all the other buildings.....	125,308.13
Expenditures for school purposes during the year ending June 30, 1919:	
By school boards.....	679,431.50
By insular government.....	1,788,271.79
Department of education.....	1,626,039.23
University of Porto Rico.....	162,232.56
Total expenditures.....	2,467,703.29

TABLE III.—Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities.

Municipality.	Schools.	Enrollment.	Average number belonging.	Attendance.	Per cent promoted.
PORTO RICO.....	University.....	1,669	1,575	1,447	.....
	High.....	2,622	2,258	1,991	.....
	Continuation.....	843	741	632	.....
	Urban.....	55,073	48,593	44,879	70.6
	Rural.....	97,995	81,983	70,605	52.9
	Night.....	2,592	2,202	1,622	.....
	Total.....	160,794	137,352	121,176	61.8
University of Porto Rico..	All departments, including summer course.....	1,669	1,575	1,447	.....
Adjuntas.....	Continuation.....	451	395	382	78.0
	Urban.....	1,863	1,566	1,324	52.0
	Rural.....	37	32	23	.....
	Night.....	.....	.....	.....	.....
	Total.....	2,351	1,993	1,709	57.0
Aguada.....	Continuation.....	255	251	220	82.5
	Urban.....	1,259	1,008	842	52.4
	Rural.....	24	23	7	.....
	Night.....	.....	.....	.....	.....
	Total.....	1,568	1,282	1,069	54.3
Aguadilla.....	High.....	128	116	95	.....
	Urban.....	1,431	1,230	1,157	68.4
	Rural.....	1,648	1,368	1,213	62.9
	Night.....	30	28	22	.....
	Total.....	3,237	2,742	2,487	65.5

TABLE III.—*Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities—Continued.*

Municipality.	Schools.	Enrollment.	Average number belonging.	Attendance.	Per cent promoted.
Aguas Buenas.....	Continuation.....				
	Urban.....	323	255	238	64.0
	Rural.....	736	655	599	53.5
	Night.....	31	30	20	
	Total.....	1,090	940	857	56.7
Aibonito.....	Continuation.....	21	19	13	
	Urban.....	498	421	415	62.3
	Rural.....	924	772	696	45.7
	Night.....	21	21	19	
	Total.....	1,464	1,233	1,143	50.8
Añasco.....	Continuation.....	28	27	23	
	Urban.....	546	432	417	69.4
	Rural.....	1,498	1,275	1,052	58.2
	Night.....	30	30	30	
	Total.....	2,102	1,764	1,522	61.2
Arecibo.....	High.....	244	202	170	
	Urban.....	1,469	1,389	1,217	79.1
	Rural.....	3,692	3,124	3,948	53.5
	Night.....	52	41	17	
	Total.....	5,457	4,756	3,948	60.8
Arroyo.....	Continuation.....				
	Urban.....	539	481	438	80.8
	Rural.....	511	434	384	57.1
	Night.....	20	20	18	
	Total.....	1,070	935	840	60.9
Barceloneta.....	Continuation.....				
	Urban.....	320	283	266	78.5
	Rural.....	968	788	637	48.4
	Night.....	34	25	21	
	Total.....	1,322	1,096	924	56.0
Barranquitas.....	Continuation.....				
	Urban.....	309	280	262	47.4
	Rural.....	972	804	767	40.0
	Night.....	18	17	12	
	Total.....	1,299	1,101	1,041	42.0
Barros.....	Continuation.....				
	Urban.....	381	318	283	67.9
	Rural.....	3,083	2,434	2,114	57.0
	Night.....	40	34	21	
	Total.....	3,504	2,786	2,418	58.2
Bayamon.....	High.....	111	94	72	
	Urban.....	2,027	1,876	1,667	70.7
	Rural.....	1,321	1,201	922	60.1
	Night.....	15	14	7	
	Total.....	3,474	3,185	2,688	66.5
Caba Rojo.....	Continuation.....	61	54	45	
	Urban.....	967	831	795	68.1
	Rural.....	1,552	1,426	1,048	66.1
	Night.....	37	26	14	
	Total.....	2,617	2,337	1,902	67.7
Caguas.....	High.....	150	128	113	
	Urban.....	1,414	1,321	1,260	81.2
	Rural.....	2,567	2,165	2,007	59.5
	Night.....	31	29	24	
	Total.....	4,162	3,643	3,404	66.2

TABLE III.—Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities—Continued.

Municipality.	Schools.	Enrollment.	Average number belonging.	Attendance.	Per cent promoted.
Camuy.....	Continuation.....				
	Urban.....	388	343	320	79.3
	Rural.....	1,377	1,181	1,008	62.5
	Night.....	30	30	27	
	Total.....	1,795	1,554	1,355	65.9
Carolina.....	Continuation.....	27	25	20	
	Urban.....	647	559	531	70.1
	Rural.....	1,887	1,542	1,439	69.0
	Night.....	76	59	37	
	Total.....	2,637	2,185	2,027	69.2
Cayey.....	Continuation.....	49	48	43	
	Urban.....	834	741	672	73.1
	Rural.....	1,048	967	560	66.7
	Night.....	20	14	12	
	Total.....	1,951	1,770	1,287	69.7
Cefiba.....	Continuation.....				
	Urban.....	171	140	129	69.2
	Rural.....	449	338	260	53.0
	Night.....	55	42	20	
	Total.....	675	520	409	59.9
Ciales.....	Continuation.....	21	19	17	
	Urban.....	473	442	416	67.5
	Rural.....	1,887	1,539	1,342	53.1
	Night.....	30	30	27	
	Total.....	2,411	2,030	1,802	56.0
Cidra.....	Continuation.....				
	Urban.....	354	302	279	62.8
	Rural.....	746	635	578	59.6
	Night.....	33	30	27	
	Total.....	1,133	967	884	60.6
Coamo.....	Continuation.....	46	34	31	
	Urban.....	876	733	693	78.8
	Rural.....	1,895	1,526	1,389	59.2
	Night.....	30	26	20	
	Total.....	2,847	2,319	2,133	65.7
Comerio.....	Continuation.....				
	Urban.....	382	304	281	71.6
	Rural.....	1,219	974	932	47.9
	Night.....	20	20	18	
	Total.....	1,621	1,298	1,231	54.0
Corozal.....	Continuation.....				
	Urban.....	343	275	258	66.2
	Rural.....	1,273	1,118	1,049	49.4
	Night.....	27	24	22	
	Total.....	1,643	1,417	1,329	53.5
Dorado.....	Continuation.....				
	Urban.....	186	179	168	52.7
	Rural.....	642	534	434	22.9
	Night.....	30	24	22	
	Total.....	858	737	624	30.0
Fajardo.....	High.....	109	101	76	
	Urban.....	1,160	1,058	1,003	73.0
	Rural.....	562	469	293	63.4
	Night.....	32	27	20	
	Total.....	1,863	1,655	1,392	69.6

TABLE III.—*Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities—Continued.*

Municipality.	Schools.	Enrollment.	Average number belonging.	Attendance.	Per cent promoted.
Gualnabo.....	Continuation.....				
	Urban.....	248	171	163	33.5
	Rural.....	810	746	616	62.7
	Night.....	20	15	12	
	Total.....	1,078	932	791	57.3
Guanica.....	Continuation.....	13	11	9	
	Urban.....	828	700	687	69.6
	Rural.....	293	215	122	57.0
	Night.....	66	67	50	
	Total.....	1,203	993	868	66.4
Mayagüez.....	High.....	146	130	108	
	Urban.....	1,360	1,299	1,079	63.5
	Rural.....	1,028	915	790	50.1
	Night.....	29	25	21	
	Total.....	2,593	2,309	1,918	58.0
Guayanilla.....	Continuation.....				
	Urban.....	442	390	340	65.0
	Rural.....	1,163	991	752	54.0
	Night.....	32	27	14	
	Total.....	1,637	1,408	1,106	57.1
Gurabo.....	Continuation.....				
	Urban.....	420	318	299	73.2
	Rural.....	1,027	856	726	39.1
	Night.....	35	25	19	
	Total.....	1,482	1,239	1,044	46.0
Hatillo.....	Continuation.....				
	Urban.....	276	260	242	75.4
	Rural.....	1,228	1,022	870	62.5
	Night.....	32	25	23	
	Total.....	1,536	1,311	1,135	65.8
Hormigueros.....	Continuation.....				
	Urban.....	154	116	108	59.6
	Rural.....	403	359	304	53.1
	Night.....	25	22	19	
	Total.....	582	497	431	55.0
Humacao.....	High.....	125	107	60	
	Urban.....	1,047	907	794	69.3
	Rural.....	1,515	1,332	1,106	56.7
	Night.....	30	30	17	
	Total.....	2,717	2,376	2,007	63.6
Isabela.....	Continuation.....				
	Urban.....	411	369	347	73.1
	Rural.....	1,707	1,488	1,372	60.0
	Night.....	33	21	18	
	Total.....	2,151	1,878	1,737	62.6
Jayuya.....	Continuation.....				
	Urban.....	310	263	252	85.1
	Rural.....	1,238	998	914	44.7
	Night.....	39	31	19	
	Total.....	1,587	1,292	1,185	52.3
Juana Díaz.....	Continuation.....				
	Urban.....	50	43	38	
	Rural.....	605	471	415	54.3
	Rural.....	1,612	1,324	1,081	45.6
	Night.....	22	20	11	
	Total.....	2,289	1,858	1,545	48.0

TABLE III.—*Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities—Continued.*

Municipality.	Schools.	Enrollment.	Average number belonging.	Attendance.	Per cent promoted.
Juncos.....	Continuation.....	43	37	33	.....
	Urban.....	666	589	565	88.5
	Rural.....	949	718	634	46.7
	Night.....	49	37	30	.....
	Total.....	1,707	1,381	1,202	63.4
Lajas.....	Continuation.....	.....	.....	.....	.....
	Urban.....	370	341	323	81.2
	Rural.....	1,233	1,110	678	72.0
	Night.....	26	24	16	.....
	Total.....	1,629	1,475	1,317	74.0
Lares.....	Continuation.....	22	22	19	.....
	Urban.....	676	631	601	70.6
	Rural.....	2,486	2,187	1,701	47.5
	Night.....	52	42	18	.....
	Total.....	3,236	2,882	2,336	52.6
Las Marias.....	Continuation.....	.....	.....	.....	.....
	Urban.....	238	187	173	81.5
	Rural.....	1,381	1,068	905	54.5
	Night.....	26	23	18	.....
	Total.....	1,645	1,268	1,096	58.3
Las Piedras.....	Continuation.....	.....	.....	.....	.....
	Urban.....	165	145	141	79.2
	Rural.....	883	831	742	69.5
	Night.....	30	28	25	.....
	Total.....	1,068	1,004	508	71.1
Loiza.....	Continuation.....	.....	.....	.....	.....
	Urban.....	464	414	399	68.1
	Rural.....	1,316	1,125	933	64.5
	Night.....	67	27	22	.....
	Total.....	1,880	1,566	1,351	65.4
Luquillo.....	Continuation.....	.....	.....	.....	.....
	Urban.....	283	194	171	62.9
	Rural.....	615	481	419	53.5
	Night.....	35	27	20	.....
	Total.....	883	702	610	56.2
Manati.....	Continuation.....	30	25	20	.....
	Urban.....	865	814	742	68.0
	Rural.....	1,365	1,136	1,007	46.5
	Night.....	52	44	25	.....
	Total.....	2,312	2,019	1,794	55.1
Maricao.....	Continuation.....	13	12	11	.....
	Urban.....	265	237	228	75.5
	Rural.....	1,114	874	716	57.2
	Night.....	20	20	16	.....
	Total.....	1,432	1,143	617	60.8
Maunabo.....	Continuation.....	.....	.....	.....	.....
	Urban.....	237	192	185	68.2
	Rural.....	640	516	453	57.8
	Night.....	41	35	28	.....
	Total.....	618	743	661	60.8
Mayaguez.....	High.....	258	244	215	.....
	Urban.....	2,662	2,250	2,133	70.3
	Rural.....	1,778	1,360	1,221	50.0
	Night.....	42	35	24	.....
	Total.....	4,740	3,889	3,593	62.1

TABLE III.—*Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities—Continued.*

Municipality.	Schools.	Enrollment.	Average number belonging.	Attendance.	Per cent promoted.
Moca.....	Continuation.....	279	262	288	88.0
	Urban.....	1,321	1,110	973	77.4
	Rural.....	81	30	26	.....
	Night.....	.....	.....	.....	.....
	Total.....	1,631	1,392	1,286	78.3
Morovis.....	Continuation.....	254	212	206	80.6
	Urban.....	1,330	1,137	1,050	45.3
	Rural.....	28	24	23	.....
	Night.....	.....	.....	.....	.....
	Total.....	1,612	1,373	1,279	51.2
Naguabo.....	Continuation.....	646	564	534	75.2
	Urban.....	906	759	662	62.0
	Rural.....	39	34	28	.....
	Night.....	.....	.....	.....	.....
	Total.....	1,591	1,357	1,224	67.2
Naranjito.....	Continuation.....	243	222	209	81.3
	Urban.....	866	773	735	56.5
	Rural.....	33	26	24	.....
	Night.....	.....	.....	.....	.....
	Total.....	1,141	1,024	968	62.0
Patillas.....	Continuation.....	365	351	330	74.8
	Urban.....	976	830	700	56.4
	Rural.....	30	26	22	.....
	Night.....	.....	.....	.....	.....
	Total.....	1,401	1,206	1,052	61.0
Penuelas.....	Continuation.....	367	318	311	72.8
	Urban.....	1,093	912	790	55.6
	Rural.....	35	31	17	.....
	Night.....	.....	.....	.....	.....
	Total.....	1,485	1,261	1,118	59.9
Ponce.....	High.....	527	427	394	.....
	Urban.....	5,904	5,126	4,601	72.8
	Rural.....	3,059	2,483	2,030	46.0
	Night.....	64	53	41	.....
	Total.....	9,554	8,094	7,066	62.9
Quebradillas.....	Continuation.....	45	43	35	.....
	Urban.....	372	325	309	80.5
	Rural.....	839	716	667	46.0
	Night.....	36	23	19	.....
	Total.....	1,292	1,107	1,030	64.0
Rincon.....	Continuation.....	215	181	180	59.7
	Urban.....	738	587	515	50.5
	Rural.....	25	20	15	.....
	Night.....	.....	.....	.....	.....
	Total.....	978	788	690	52.5
Río Grande.....	Continuation.....	50	45	37	.....
	Urban.....	430	361	355	62.7
	Rural.....	1,359	1,026	914	57.8
	Night.....	24	24	18	.....
	Total.....	1,863	1,456	1,324	59.0
Río Piedras.....	Continuation.....	96	92	83	.....
	Urban.....	901	816	720	73.3
	Rural.....	1,868	1,509	1,406	63.8
	Night.....	30	30	24	.....
	Total.....	2,897	2,447	2,233	66.9

TABLE III.—*Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities—Continued.*

Municipality.	Schools.	Enrollment.	Average number belonging.	Attendance.	Per cent promoted.
Sabana Grande.....	Continuation.....	39	34	33	.....
	Urban.....	505	518	481	71.7
	Rural.....	753	697	608	53.3
	Night.....	30	30	23	.....
	Total.....	1,417	1,279	1,145	61.0
Salinas.....	Continuation.....	.....	.....	.....	.....
	Urban.....	468	394	354	63.1
	Rural.....	1,121	880	686	49.5
	Night.....	76	64	53	.....
	Total.....	1,665	1,338	1,093	53.4
San German.....	Continuation.....	59	43	32	.....
	Urban.....	879	769	729	75.5
	Rural.....	2,363	1,975	1,708	74.9
	Night.....	33	30	26	.....
	Total.....	3,334	2,817	2,495	75.0
Santa Isabel.....	Continuation.....	18	12	9	.....
	Urban.....	383	335	317	72.8
	Rural.....	460	386	306	60.8
	Night.....	37	28	19	.....
	Total.....	898	761	651	66.0
San Juan.....	High.....	706	609	568	.....
	Urban.....	7,265	6,500	6,225	64.3
	Rural.....	.....	.....	.....	.....
	Night.....	50	42	20	.....
	Total.....	8,030	7,151	6,813	64.3
San Lorenzo.....	Continuation.....	.....	.....	.....	.....
	Urban.....	539	527	476	76.3
	Rural.....	1,285	1,025	948	52.8
	Night.....	32	30	25	.....
	Total.....	1,856	1,582	1,449	60.6
San Sebastian.....	Continuation.....	.....	.....	.....	.....
	Urban.....	413	384	369	72.5
	Rural.....	2,081	1,862	1,731	65.0
	Night.....	24	24	14	.....
	Total.....	2,518	2,270	2,114	66.2
Toa Alta.....	Continuation.....	.....	.....	.....	.....
	Urban.....	274	249	215	70.2
	Rural.....	1,035	875	769	38.1
	Night.....	26	23	18	.....
	Total.....	1,335	1,147	1,002	42.5
Toa Baja.....	Continuation.....	.....	.....	.....	.....
	Urban.....	307	257	248	57.8
	Rural.....	775	670	539	57.5
	Night.....	37	33	24	.....
	Total.....	1,119	960	811	57.6
Trujillo Alto.....	Continuation.....	.....	.....	.....	.....
	Urban.....	175	168	155	74.4
	Rural.....	800	679	655	60.4
	Night.....	31	30	21	.....
	Total.....	1,006	875	835	63.0
Utterado.....	Continuation.....	21	20	18	.....
	Urban.....	749	651	637	77.3
	Rural.....	3,515	2,715	2,352	52.7
	Night.....	21	21	12	.....
	Total.....	4,306	3,407	3,019	57.6

TABLE III.—*Enrollment, average number belonging, attendance, and per cent promoted for Porto Rico and municipalities—Continued.*

Municipality.	Schools.	Enroll- ment.	Average number belonging.	Attend- ance.	Per cent promot- ed.
Vega Alta	Continuation.....				
	Urban.....	260	238	216	83.4
	Rural.....	759	612	503	59.2
	Night.....	30	25	21	
	Total.....	1,049	875	740	65.8
Vega Baja	Continuation.....	43	37	31	
	Urban.....	630	556	502	75.3
	Rural.....	1,308	1,148	951	56.5
	Night.....	30	25	22	
	Total.....	2,011	1,766	1,506	62.9
Vieques	Continuation.....	22	21	17	
	Urban.....	514	439	423	76.3
	Rural.....	653	537	453	55.2
	Night.....	37	34	26	
	Total.....	1,226	1,031	919	65.0
Villalba	Continuation.....				
	Urban.....	156	122	105	32.9
	Rural.....	1,009	828	680	50.3
	Night.....	30	26	23	
	Total.....	1,195	976	808	48.0
Yabucoa	Continuation.....	24	18	15	
	Urban.....	632	582	571	81.8
	Rural.....	1,788	1,578	1,375	54.8
	Night.....	41	33	30	
	Total.....	2,485	2,211	1,991	62.0
Yauco	High.....	118	100	90	
	Urban.....	1,039	899	845	69.6
	Rural.....	2,417	2,037	1,972	54.9
	Night.....	34	26	22	
	Total.....	3,608	3,062	2,929	59.1
Culebra	Continuation.....				
	Urban.....				
	Rural.....	143	82	62	66.3
	Night.....				
	Total.....	143	82	62	66.3

TABLE IV.—*School buildings.*

Municipalities.	Public property.				Rented.				Total rooms
	Urban.		Rural.		Urban.		Rural.		
	Build-ings.	Class-rooms.	Build-ings.	Class-rooms.	Build-ings.	Class-rooms.	Build-ings.	Class-rooms.	
San Juan.....	15	146			3	17			163
Rio Piedras.....	5	24	2	11			13	14	49
Trujillo Alto.....	1	6	2	2			10	10	18
Carolina.....	2	12	4	4	1	2	20	21	39
Rio Grande.....	2	10	5	6	1	1	15	16	33
Loiza.....	1	6	1	1	3	6	21	21	34
Fajardo.....	3	24	1	2	4	16	10	11	53
Cajab.....			1	2	2	4	8	8	14
Luquillo.....	2	5			2	5	9	9	19
Naguabo.....	1	10	5	5	2	3	14	14	32
Vieques.....	3	13	1	2			9	9	24
Humacao.....	3	25	5	6	2	4	18	18	53
Las Piedras.....	2	3	2	3	1	1	10	10	17
Yabucoa.....	1	8	4	7	6	7	23	26	48
Maunabo.....	1	5	2	2	1	1	8	10	18
Arroyo.....	2	8	3	3	2	5	7	7	23
Patillas.....	1	4	3	3	4	7	15	16	30
Juncos.....	1	1	8	8	2	15	5	5	29
Gurabo.....	2	9	3	3	1	1	11	11	24
Caguas.....	4	21	2	2	7	18	33	37	78
San Lorenzo.....	1	6	2	2	2	6	16	17	31
Guayama.....	3	15	4	7	7	21	12	19	62
Salinas.....	2	10	7	12			8	8	30
Santa Isabel.....	3	11	8	9			1	1	21
Cayey.....	3	18	10	10	1	3	14	14	45
Cidra.....	1	4	1	1	2	4	12	14	23
Comerio.....	3	10	3	3			15	15	28
Aguas Buenas.....	1	6	4	4	1	1	7	7	18
Naranjito.....	1	4	8	8	1	1	5	5	18
Albionito.....	1	8	1	1	2	3	12	13	25
Barranquitas.....	2	6	5	5	1	1	10	10	22
Barros.....	2	7	4	4			26	39	50
Coamo.....	2	10	3	3	3	9	25	25	47
Juana Diaz.....	2	16	11	12			16	16	44
Villaiba.....					3	4	19	19	23
Ponce.....	13	124	2	3	4	12	45	50	189
Guayanilla.....	1	4	6	6	5	5	15	15	30
Penuelas.....	1	5			3	3	21	21	29
Yauco.....	3	23	22	25	1	4	13	14	66
Guanica.....	3	8	3	4	2	11	1	1	24
San German.....	3	26	5	7	9	17	28	31	81
Sabana Grande.....	1	4	6	6	7	12	4	4	26
Cabo Rojo.....	1	4	4	4	6	20	20	23	51
Lajas.....	2	5	11	11	3	5	11	11	32
Maaguez.....	5	50	20	23	1	10	9	9	92
Hormigueros.....					2	4	6	8	12
Maricao.....	1	4	9	10	4	4	7	7	25
Las Marias.....	1	4	8	9	1	1	12	13	27
Anasco.....	2	10	7	7	2	5	15	15	37
Rincon.....	1	4			1	1	10	11	16
Aguada.....	1	5	6	6	2	3	10	12	26
Lares.....	3	8	8	9	3	8	19	21	46
San Sebastian.....	1	2	6	7	6	9	19	19	37
Aguadilla.....	2	16	4	5	1	19	14	16	56
Moca.....	1	4	8	8	2	2	8	9	23
Isabela.....	2	10	3	4	2	2	19	22	38
Quebradillas.....	3	8	4	5	2	4	8	10	27
Utadio.....	1	12	9	10	2	5	36	36	63
Adjuntas.....	1	4	11	11	3	7	15	15	37
Jayuya.....			1	1	4	7	15	15	23
Camuy.....	3	10	14	16			2	2	28
Hatillo.....	1	4	8	10	1	2	3	7	23
Arecibo.....	4	51	12	22	1	2	41	41	116
Manati.....	1	8	8	10	5	12	11	11	41
Barceloneta.....			3	8	3	7	8	8	23
Ciales.....	2	9	1	1	2	7	27	27	44
Vega Baja.....	1	8	6	8	1	1	6	6	23
Vega Alta.....	2	7	4	5			6	6	18
Corozal.....	1	6	7	9	1	2	4	8	25
Morovis.....			7	7	2	6	11	11	24
Toa Baja.....	1	4	6	8	4	5	7	12	29
Toa Alta.....	1	6	6	6			11	11	23
Dorado.....			1	1	6	6	10	10	17
Pavamon.....	3	14	3	4	11	32	15	20	70
Guainabo.....			3	3	3	5	12	13	21
Total.....	152	942	377	452	184	433	1,011	1,096	2,923

TABLE V.—*Distribution by grade, age, and sex of pupils enrolled during the year 1918-19.*

A.—SECONDARY SCHOOLS.

Age.	High schools.					Continuation schools.			All secondary schools.				
	Grades.				Total.	Grades.		Total.	Grades.				Total.
	12	11	10	9		10	9		12	11	10	9	
BOYS.													
12				4	4							4	4
13			1	10	11		2	2				1	13
14		2	15	55	72	2	19	21		5	17	74	106
15		5	40	105	150	3	39	42		8	43	144	222
16	9	38	70	125	242	9	73	82	9	38	79	198	329
17	24	67	96	102	289	24	68	92	24	67	120	179	324
18	37	67	65	61	230	11	46	57	37	67	76	107	200
19	43	46	35	19	143	13	23	36	43	46	48	127	234
20	45	14	10	2	71	8	8	16	45	14	18	75	136
21	19	6	3		28	3	2	5	19	6	6	31	60
22	2	1	1		4		1	1	2	1	1	4	8
23			2		2						2	2	4
24	1				1				1			1	2
Total	180	246	338	483	1,247	73	281	354	180	246	411	764	1,601
Average	18.9	17.7	17.1	16.1	17.4	17.7	16.7	17.2	18.9	17.7	17.4	16.3	17.5
GIRLS.													
12				3	3							3	3
13			6	23	29		8	8			6	21	30
14	1	2	16	73	92	3	22	25	1	2	19	95	119
15	3	23	43	111	180	8	73	91	3	23	51	184	231
16	2	59	111	149	321	23	107	130	2	59	134	256	345
17	30	73	93	93	289	43	78	121	30	73	136	171	264
18	46	82	67	51	246	23	43	66	46	82	90	94	132
19	51	48	28	14	141	14	27	41	51	48	42	111	156
20	29	15	6	6	56	6	4	10	29	15	12	56	72
21	8	3	1		12	3	3	6	8	3	4	15	20
22	2			1	3				2			3	5
23	2				2	1		1	2		1	4	6
24	1				1				1			1	2
Total	175	305	371	524	1,375	124	365	489	175	305	405	899	1,564
Average	18.9	17.8	16.6	15.8	17.2	17.3	16.3	16.8	18.9	17.8	16.9	16.1	17.4
BOYS AND GIRLS.													
12				7	7		10	10				7	17
13				33	40		41	46				43	89
14	1	4	31	128	164	5	112	123	1	4	36	169	211
15	3	28	83	216	330	11	180	212	3	28	94	328	423
16	11	97	181	274	563	32	146	213	11	97	213	454	604
17	54	140	189	195	578	67	89	123	54	140	256	441	588
18	83	149	132	112	476	34	50	77	83	149	166	201	263
19	94	94	63	33	284	27	12	26	94	94	90	83	119
20	74	29	16	8	127	14	5	11	74	29	30	20	133
21	27	9	4		40	6	1	1	27	9	10	5	42
22	4	1	1	1	7			1	4	1	1	2	8
23	2		2		4	1			2		3	5	9
24	2				2				2			2	4
Total	355	551	709	1,007	2,622	197	646	843	355	551	906	1,655	3,466
Average	18.9	17.7	16.8	16.0	17.3	17.5	16.5	17.0	18.9	17.7	17.1	16.2	17.4

TABLE V.—*Distribution by grade, age, and sex of pupils enrolled during the year 1918-19—Continued.*

B.—ELEMENTARY URBAN SCHOOLS.

Ages.	Grades.								Total.	Per cent of each age.
	8	7	6	5	4	3	2	1		
BOYS.										
5.....								54	54	0.18
6.....						1	42	524	567	1.92
7.....					57	58	358	1,722	2,195	7.46
8.....				3	257	393	858	1,680	3,200	10.88
9.....			9	30	622	869	915	914	3,359	11.42
10.....		1	51	190	832	1,157	845	726	3,802	12.92
11.....	2	24	181	458	998	980	536	328	3,507	11.92
12.....	22	117	356	732	806	853	404	294	3,586	12.90
13.....	93	284	547	759	439	455	170	83	2,830	9.62
14.....	273	446	503	575	168	247	72	21	2,304	7.83
15.....	323	430	343	285	39	62	17	10	1,509	5.13
16.....	317	285	173	106	6	18	4	1	910	3.09
17.....	245	123	48	26	3	10	12		467	1.58
18.....	109	44	13	6	6				191	.64
19.....	21	3		1					25	.09
20.....	4	2		9					15	.05
21.....	2			1					3	.01
Total.....	1,411	1,758	2,224	3,181	4,235	5,115	4,234	6,366	28,524	100.00
Average.....	15.4	14.6	13.4	12.7	10.9	10.7	9.4	8.3	11.9	.....
GIRLS.										
5.....								62	62	.23
6.....						2	46	500	548	2.05
7.....					1	72	419	1,708	2,200	8.14
8.....			1	4	64	477	971	1,610	3,127	11.56
9.....			5	67	352	926	917	830	3,097	11.46
10.....		1	54	261	745	1,050	793	638	3,542	13.11
11.....	1	25	178	475	829	806	420	277	3,011	11.13
12.....	30	144	377	650	867	667	294	187	3,216	11.90
13.....	129	287	547	745	648	340	107	66	2,869	10.51
14.....	274	391	548	516	368	180	20	14	2,770	9.40
15.....	418	402	362	202	86	21	8	1	1,500	5.55
16.....	339	239	109	50	14	3			754	2.79
17.....	149	67	37	7					261	.97
18.....	56	19			1				76	.32
19.....	11	1							12	.04
20.....	1								1	.....
21.....	3								3	.01
Total.....	1,411	1,576	2,218	2,977	3,975	4,495	4,004	5,893	26,549	100.00
Average.....	15.1	14.3	13.3	12.4	11.5	10.3	9.0	8.2	11.7	.....
BOYS AND GIRLS.										
5.....								116	116	.21
6.....						3	88	1,024	1,115	2.00
7.....					58	130	777	3,430	4,386	7.90
8.....			1	7	321	870	1,829	3,299	6,327	11.39
9.....			14	97	974	1,795	1,832	1,744	6,456	11.62
10.....		2	105	451	1,577	2,207	1,638	1,364	7,344	13.22
11.....	3	49	359	933	1,827	1,796	956	605	6,518	11.73
12.....	52	261	733	1,382	1,675	1,520	698	481	6,802	12.24
13.....	222	571	1,094	1,504	1,087	795	277	149	5,699	10.26
14.....	547	836	1,051	1,091	536	377	101	35	4,574	8.63
15.....	741	832	705	487	125	83	25	11	3,009	5.42
16.....	1,397	524	282	156	20	21	4	1	1,664	3.00
17.....	394	190	85	33	3	11	12		728	1.30
18.....	165	63	13	6	7	12	1		267	.49
19.....	32	4		1		3			37	.07
20.....	5	2		9					16	.03
21.....	5			1					6	.01
Total.....	2,822	3,334	4,442	6,158	8,210	9,610	8,238	12,259	55,073	100.00
Average.....	15.8	14.5	13.4	12.6	11.3	10.5	9.2	8.3	11.8	.....

TABLE V.—*Distribution by grade, age, and sex of pupils enrolled during the year 1918-19—Continued.*

C.—RURAL SCHOOLS.

Ages.	Grades.								Total.	Per cent at each age.	
	8	7	6	5	4	3	2	1			
BOYS.											
5.....							1	410	411	0.73	
6.....							25	2,531	2,556	4.60	
7.....						23	381	6,038	6,442	11.59	
8.....					13	232	1,638	6,073	7,956	14.32	
9.....				4	128	934	2,374	4,195	7,635	13.74	
10.....				26	524	1,946	2,842	3,746	9,084	16.35	
11.....			4	103	961	1,969	1,790	1,670	6,897	11.51	
12.....		2	22	216	1,627	2,184	1,533	1,538	7,122	12.81	
13.....		4	39	215	1,362	1,454	784	595	4,453	8.15	
14.....	2	11	46	214	969	847	326	291	2,706	4.87	
15.....	2	10	26	147	517	339	141	109	1,291	2.32	
16.....	1	11	21	60	197	108	67	38	503	.905	
17.....	3	2	12	26	53	44	13	13	166	.298	
18.....	1	3	5	11	26	20	14	8	88	.158	
19.....	2	1			6	3			12	.02	
20.....											
21.....											
Total.....	11	44	175	1,022	6,383	10,103	11,929	27,155	56,822	100.00	
Average.....	16.4	15.0	14.1	13.3	12.5	11.4	10.2	8.9	10.0		
GIRLS.											
5.....							2	356	358	.71	
6.....							1	28	2,005	2,034	5.06
7.....							31	380	4,672	5,083	13.16
8.....						10	276	1,305	4,463	6,064	15.10
9.....						108	826	1,823	2,923	5,683	14.36
10.....				1	23	595	1,641	2,071	2,677	7,008	17.01
11.....			5	75	813	1,524	1,164	1,150	4,731	11.46	
12.....	1	2	26	141	1,077	1,596	988	1,058	4,889	11.77	
13.....	1	5	25	169	894	919	470	379	2,862	6.72	
14.....	3	7	28	131	532	497	216	152	1,566	3.13	
15.....	5	5	16	54	226	180	64	63	613	1.26	
16.....	2	1	5	22	72	54	20	17	193	.38	
17.....	1	1		7	17	12	9	17	64	.28	
18.....		2	1	1	2	8	10	8	32	.06	
19.....						2			2		
20.....						1			1		
21.....											
Total.....	13	23	107	626	4,346	7,568	8,550	19,940	41,173	100.00	
Average.....	14.6	14.3	13.5	12.9	12.1	11.2	10.0	8.4	9.7		
BOYS AND GIRLS.											
5.....							3	766	769	.76	
6.....							1	53	4,536	4,590	4.59
7.....							54	761	10,710	11,525	11.52
8.....						23	508	2,943	10,536	14,010	14.01
9.....						236	1,760	4,197	7,118	13,318	13.31
10.....				4		7	3,587	4,913	6,423	16,092	16.09
11.....			1	178	1,119	3,493	2,954	2,720	11,128	11.12	
12.....	1	4	48	357	2,704	3,780	2,521	2,596	12,011	12.01	
13.....	1	9	64	384	2,256	2,373	1,254	974	7,315	7.31	
14.....	5	18	74	345	1,501	1,344	542	443	4,272	4.27	
15.....	7	15	42	201	743	519	206	172	1,904	1.90	
16.....	3	12	26	82	299	162	87	55	696	.69	
17.....	4	3	12	33	70	56	22	30	230	.23	
18.....	1	5	6	12	28	28	24	16	120	.12	
19.....	2	1			6	5			14	.01	
20.....									1		
21.....											
Total.....	24	67	282	1,648	10,729	17,671	20,479	47,095	97,995	100.00	
Average.....	15.5	14.7	13.8	13.1	12.3	11.3	10.1	8.7	9.9		

TABLE VI.—*Private schools.*

Number of schools	60
Official course of study followed in	25
Number of teachers	219

DISTRIBUTION BY GRADES.

Kindergarten and Colonial dame schools.....	169	Grade 8	166
Grade 1	2,599	Grade 9	163
Grade 2	727	Grade 10	125
Grade 3	516	Grade 11	71
Grade 4	371	Grade 12	42
Grade 5	334		
Grade 6	256	Total enrollment	5,722
Grade 7	183	Average daily attendance	4,578

TABLE VII.—*Report on number of textbooks on hand.*

COMMON SCHOOL.

On hand June 30, 1918	995,451
Purchased during the year	87,028
Total	1,082,479
Condemned during the year	54,477
On hand June 30, 1919	1,028,002

HIGH SCHOOL.

On hand June 30, 1918	82,698
Purchased during the year	9,418
Total	92,116
Condemned during the year	21,272
On hand June 30, 1919	70,844

BOOKS ON HAND JUNE 30, 1919.

Common school	1,028,002
High school	70,844
Total	1,098,846

TABLE VIII.—*Financial tables—Insular appropriations.*

EXPENDITURES FOR TEXTBOOKS AND SUPPLIES AND CONTINGENT EXPENSES.

Textbooks and supplies	\$70,585.28
Contingent expenses:	
Common schools	6,571.48
High schools	6,798.71
Total	83,955.47

SALARIES OF COMMON-SCHOOL TEACHERS 1918-19.

[Amounts paid by school months.]

Month.	Number of teachers.	Amount paid..
1918		
August	2,545	\$123,485.65
September	2,656	129,325.40
October	2,773	132,725.27
November	2,701	131,494.97
December	2,745	131,853.00
1919		
January	2,788	133,402.25
February	2,808	135,464.41
March	2,841	123,715.96
April	2,845	136,497.99
May	2,848	136,541.32

Average number of teachers, 2,755, at an average salary of \$47.71.

Average number of night-school teachers, 79 for three months, at an average salary of \$19.49.

Repayments as provided by law are shown in the following table:

TABLE VIII.—*Financial tables—Insular appropriations—Continued.*

REPAYMENTS, COMMON-SCHOOL TEACHERS.

Fiscal year.	Teachers.	Days absent.	Days repaid.	Amount.
1912-13.....	1,855	7,610	1,968	\$4,360.74
1913-14.....	2,431	7,101	4,750	13,161.57
1914-15.....	2,330	8,471	6,239	14,096.39
1915-16.....	2,323	7,150	6,107	14,611.79
1916-17.....	2,513	12,581	9,123	19,993.58
1917-18.....	2,484	13,932	8,516	26,340.21
1918-19.....	2,755	19,499	14,698	33,675.38

Total amount paid from "Salaries, common schools," is as follows:

Supervisor of schools (12 months).....	\$51,515.57
All teachers (10 months).....	1,314,516.22
Teachers' pension fund.....	13,296.59
By transfers.....	3,924.12
Total.....	1,383,252.50

SALARIES, HIGH SCHOOLS, 1918-19.

From the total amount of \$98,190 made available by appropriation and transfers, the following payments were made:

Eleven principals for 10 months (1 at \$1,900, 1 at \$1,600, 1 at \$1,500, 3 at \$1,200, 4 at \$1,100, and 1 at \$1,000).....	\$13,831.41
High-school teachers for 10 months (2 at \$1,200, 2 at \$1,100, 33 at \$1,000, 31 at \$900, 1 at \$850, and 11 at \$800).....	75,481.81
Average number of high-school teachers 80, at an average salary of \$94.35.....	1,320.00
Four janitors for 12 months (3 at \$360, 1 at \$240).....	874.54
Teachers' pension fund.....	91,507.76
Total.....	6,682.24
Total appropriation.....	98,190.00

TEACHERS' PENSION FUND, 1918-19.

Paid into fund from the following appropriations:

Salaries, common schools.....	\$13,296.59
Salaries, high schools.....	874.54
Salaries, office of the commissioner.....	28.33
Salaries, government island of Culebra.....	8.55
Total.....	14,208.01

COMPARISON OF APPROPRIATIONS.

Appropriations.	1916-17	1917-18	1918-19	1919-20	Increase.
Salaries and contingent expenses, office of the commissioner.....	\$48,126.68	\$58,490	\$54,760	\$62,025.00	\$7,265.00
Salaries and contingent expenses, common schools.....	1,210,140.00	1,234,540	1,489,600	2,068,623.25	579,023.25
Textbooks and school supplies.....	69,500.00	75,000	75,000	80,000.00	5,000.00
Salaries and contingent expenses, high schools.....	58,845.00	83,000	105,000	145,000.00	40,000.00
Scholarships, United States.....	3,500.00	500	500	10,000.00	9,500.00
Summer schools and institutes.....	2,000.00	2,000	2,000	2,000.00	.....
Girls' charity school: Salaries, subsistence and contingent.....	13,420.07	37,459	.....	.....	.....
Boys' charity school: Salaries, subsistence and contingent.....	23,331.73	60,045	.....	(?)	.....
Total.....	1,428,863.48	1,551,024	1,726,860	2,367,653.25	640,793.25

¹ Charity-school appropriations were taken over by this department under date of Mar. 14, 1917.² Charity-school appropriations were transferred to department of sanitation Feb. 8, 1918

TABLE IX.—*School board finances—Receipts and expenditures, 1918-19.*

Municipality.	Cash on hand June 30, 1918.	Receipts by school board treasurers.					
		School fund.	School tax.	Miscellaneous.			
				Loan.	Interest on deposits.	Reimbursements.	Gifts.
San Juan.....	\$142,375.85	\$33,969.55	\$35,339.26		\$4,005.23	\$149.03	
Rio Piedras.....	7,646.49	9,995.87	5,612.06		189.37		
Trujillo Alto.....	1,572.17	1,975.95	1,241.04		38.99		
Carolina.....	2,014.12	5,354.35	3,716.61		48.37	102.24	
Rio Grande.....	1,676.62	3,490.89	2,296.05		24.44	10.70	
Loiza.....	4,165.58	5,367.02	1,752.62		80.14		
Pajardo.....	3,276.02	7,067.06	5,041.97	\$5,000.00	64.06	10.20	
Ceiba.....	1,671.59	1,967.88	1,162.99		35.29		
Luquillo.....	967.91	1,215.67	1,391.52		22.85	20.96	
Naguabo.....	223.28	2,064.46	2,484.35		14.20		
Vieques.....	10,639.89	6,232.31	3,707.41		161.95	37.38	
Humacao.....	905.33	3,758.95	4,962.47		23.34	53.64	
Las Piedras.....	2,037.06	1,804.12	1,072.13		44.18		
Yabucoa.....	1,383.23	4,744.90	3,871.98		47.85		
Maunabo.....	719.14	1,413.42	1,009.89		27.09		
Arroyo.....	1,614.46	3,769.32	187.37		34.68	8.41	
Patillas.....	1,851.47	3,035.96	1,907.50		65.86	8.95	
Juncos.....	248.33	4,064.19	2,223.92		14.24	100.00	
Gurabo.....	419.59	1,410.46	1,447.01		15.07	474.18	
Caguas.....	2,250.10	9,804.23	6,185.26		73.38	10.40	
San Lorenzo.....	837.70	1,573.61	1,274.83		23.85		
Guayama.....	2,352.98	8,594.63	6,216.10		61.82	203.62	
Salinas.....	5,492.33	9,860.31	5,092.18		88.97	18.00	
Santa Isabel.....	6,031.20	5,138.56	4,158.46		151.71		
Cayey.....	2,523.56	3,002.17	3,144.34	4,500.00	56.41		
Cidra.....	1,138.13	1,495.94	1,261.75		30.58		
Comerio.....	2,600.16	3,880.88	2,107.04		55.05		
Agua Buenas.....	752.98	932.78	833.02		16.15	.79	
Naranjito.....	847.32	650.81	530.19		19.05		\$50.00
Albionito.....	1,106.86	1,695.76	1,432.52		31.90	10.02	
Berranquitas.....	750.87	1,121.26	698.80		24.74		
Berros.....	898.86	1,768.24	1,110.16		25.10	11.45	
Coamo.....	3,606.53	3,733.46	1,913.62		73.32	7.00	293.47
Juana Diaz.....	8,154.07	5,553.01	4,720.58		281.67	38.55	
Villaalba.....	953.01	1,233.32	907.14		25.82	719.27	
Ponce.....	3,733.75	17,338.27	17,885.10		122.61	.50	
Guayanilla.....	2,465.89	3,610.65	1,771.29		68.83	37.40	
Penuelas.....	231.24	2,454.14	1,405.76		24.02		
Yauco.....	1,366.72	5,910.60	3,258.12		32.88	60.00	
Guánica.....	2.01	8,072.41	5,629.45	30,000.00	280.68	33.60	
San German.....	2,656.17	5,251.14	3,093.85		73.11	46.15	
Sebana.....	461.98	1,438.64	950.32		17.37		
Cabo Rojo.....	2,194.17	4,529.60	2,743.24		67.67	233.60	
Lajas.....	2,791.85	3,870.96	2,183.64		72.71	.74	
Mayaguez.....	31,286.44	9,213.46	8,867.68		779.52	201.25	
Hormigueros.....	5,060.39	1,895.14	1,164.35		139.72		
Maricao.....	334.24	3,106.48	1,681.95		10.78	30.00	400.00
Las Marias.....	4,426.83	3,245.02	1,487.41		64.51		
Anasco.....	2,191.01	3,488.50	2,215.54		43.03	85.93	
Rincon.....	284.93	1,363.14	1,100.39		11.33		42.00
Aguaada.....	2,705.19	3,158.03	1,562.26		49.20	169.75	
Lares.....	3,073.11	5,166.27	2,706.30		78.37	18.90	38.20
San Sebastian.....	4,032.34	4,492.57	2,247.66		87.12	8.60	
Aguadilla.....	1,476.88	2,988.18	2,249.81	2,500.00	48.21		
Moca.....	1,298.34	1,953.72	995.57		29.85		
Isabela.....	341.05	2,575.34	1,485.44		19.32	1.80	
Quebradillas.....	635.35	1,667.57	992.31		21.31	39.35	
Utua.....	3,187.10	4,361.06	3,039.67		65.62	16.09	173.13
Adjuntas.....	3,537.54	3,805.75	2,384.31		91.62		
Jayuya.....	1,687.52	2,014.23	1,487.21		38.76		
Camuy.....	4,443.32	2,326.84	1,935.40		45.76		
Hatillo.....	1,420.28	2,689.10	1,802.50		42.09		
Arecibo.....	6,580.07	13,393.06	10,362.93		146.94	148.27	
Manatí.....	3,950.98	5,191.53	3,529.50		70.59	23.64	1.50
Barceloneta.....	8,341.67	4,604.24	2,892.27		123.59	10.00	
Ciales.....	774.20	3,075.37	2,290.63		30.09	4.17	
Vega Baja.....	1,969.86	4,592.42	2,677.16		54.77	.25	
Vega Alta.....	1,833.07	2,349.38	2,374.92		27.54		
Corozal.....	625.33	813.74	807.59		15.31	17.93	184.00
Morovis.....	6.37	1,534.74	952.10		8.86	.37	
Toa Baja.....	1,398.84	4,370.06	2,438.62		35.71	13.41	
Toa Alta.....	1,543.70	1,632.37	1,034.48		36.47	1.30	
Donado.....	5,994.43	2,429.96	1,675.58		122.31	34.00	
Bayamon.....	3,807.75	9,107.36	5,453.41		111.09		
Guainabo.....	903.80	2,000.77	1,266.34		16.49		
Total.....	350,970.45	329,944.03	238,066.20	42,000.00	9,223.50	3,294.83	1,182.30

TABLE IX.—*School board finances—Receipts and expenditures 1918-19—Continued.*

Municipality.	Total receipts including balance	Retained by insular treasurer for repayment of loans.	Aggregate resources.	Aggregate payments including those retained by insular treasurer.	Cash balance June 30, 1919.
San Juan.....	\$216,038.92	\$42,150.00	\$258,188.92	\$182,405.51	\$75,783.41
Rio Piedras.....	23,443.79		23,443.79	8,031.08	15,412.71
Trujillo Alto.....	4,828.15	244.79	5,072.94	3,147.30	1,925.64
Carolina.....	11,235.69		11,235.69	7,550.19	3,685.50
Rio Grande.....	7,498.70		7,498.70	3,667.10	3,831.60
Loiza.....	11,365.36		11,365.36	8,211.71	3,153.65
Fajardo.....	20,479.33	635.14	21,114.47	14,893.47	6,221.00
Ceiba.....	4,807.45		4,807.45	3,616.84	1,190.61
Luquillo.....	3,620.21	961.61	4,581.82	3,547.45	1,034.37
Naguabo.....	4,816.29	2,107.50	6,923.79	5,416.50	1,507.29
Vieques.....	20,828.94		20,828.94	16,353.69	4,475.25
Humacao.....	9,703.73	4,350.00	14,053.73	13,059.58	994.15
Las Piedras.....	4,957.51		4,957.51	2,853.99	2,103.52
Yabucoa.....	10,047.96		10,047.96	8,845.86	1,202.10
Maunabo.....	3,169.54	320.10	3,489.64	2,890.86	598.78
Arrovo.....	5,614.24		5,614.24	3,286.62	2,327.62
Patillas.....	6,869.74		6,869.74	4,714.43	2,155.31
Juncos.....	6,640.68		6,640.68	4,725.50	1,915.09
Gurabo.....	3,766.31	1,391.02	5,157.33	4,887.07	270.26
Caguas.....	18,323.37		18,323.37	16,975.38	1,347.99
San Lorenzo.....	3,709.99	510.57	4,220.56	3,655.43	555.13
Guayama.....	17,429.15		17,429.15	11,829.87	5,599.28
Salinas.....	20,551.79		20,551.79	12,310.40	8,241.39
Santa Isabel.....	15,479.93		15,479.93	7,707.96	7,772.07
Cayey.....	13,226.48	3,257.50	16,483.98	13,978.37	2,505.61
Cidra.....	3,926.40	228.29	4,154.69	3,138.33	1,016.36
Comerio.....	8,643.13	555.88	9,200.01	7,159.89	2,040.12
Aguas Buenas.....	2,505.72	101.50	2,607.22	1,930.91	676.31
Naranjito.....	2,097.37	159.33	2,256.70	1,674.91	581.79
Albionito.....	4,277.06	692.86	4,969.92	3,846.73	1,123.19
Barranquitas.....	2,595.67		2,595.67	1,620.50	965.17
Barros.....	3,813.81		3,813.81	3,415.29	398.52
Coamo.....	9,627.40		9,627.40	7,904.43	1,722.97
Juana Diaz.....	18,747.88		18,747.88	6,015.70	12,732.18
Villalba.....	3,838.56		3,838.56	1,552.35	2,286.21
Ponce.....	39,090.23	17,780.00	56,870.23	45,710.16	11,150.07
Guayanilla.....	7,954.06	302.39	8,256.45	5,624.60	2,631.85
Penuelas.....	4,115.16		4,115.16	3,015.98	1,099.18
Yauco.....	10,628.32		10,628.32	9,420.39	1,207.93
Guánica.....	44,018.15	3,900.00	47,918.15	14,731.24	33,186.91
San German.....	11,120.42		11,120.42	8,995.23	2,125.19
Sabana Grande.....	2,868.31		2,868.31	2,152.41	715.90
Cabo Rojo.....	9,768.37		9,768.37	8,318.80	1,449.57
Lajas.....	8,919.90		8,919.90	4,646.93	4,272.97
Mayaguez.....	50,348.35	8,255.00	58,603.35	56,946.02	1,657.33
Hormigueros.....	8,259.60		8,259.60	2,042.03	6,217.57
Maricao.....	5,563.45		5,563.45	4,957.21	606.24
Las Marais.....	9,234.67		9,234.67	5,079.71	4,154.96
Anasco.....	8,024.01	458.67	8,480.68	6,921.84	1,558.84
Rincon.....	2,821.79	476.57	3,298.36	2,716.50	581.86
Aguada.....	7,644.43	354.90	7,999.33	5,194.57	2,804.76
Lares.....	11,081.15		11,081.15	7,603.54	3,477.71
San Sebastian.....	10,858.29		10,858.29	5,680.97	5,177.32
Aguadilla.....	9,233.08	1,623.19	10,856.27	9,955.51	900.76
Moca.....	4,277.48	71.03	4,348.51	2,763.50	1,584.92
Isabela.....	4,462.95		4,462.95	3,755.51	707.44
Quebradillas.....	3,355.89		3,355.89	2,820.87	525.02
Utua.....	10,842.67	2,377.50	13,220.17	9,849.12	3,371.05
Adjuntas.....	9,799.22		9,799.22	6,958.87	2,840.35
Jayuya.....	5,227.72		5,227.72	3,731.71	1,496.01
Camuy.....	8,751.32	1,405.00	10,156.32	9,199.13	957.19
Hatillo.....	5,953.97		5,953.97	2,658.28	3,295.69
Arecibo.....	30,621.27	3,810.00	34,431.27	24,840.36	9,590.91
Manati.....	12,767.74	608.76	13,376.50	11,670.39	1,706.11
Barceloneta.....	15,971.77		15,971.77	11,868.67	4,103.10
Ciales.....	6,174.39	480.15	6,654.54	5,130.64	1,523.90
Vega Baja.....	9,294.46		9,294.46	6,247.52	3,046.94
Vega Alta.....	6,604.91	483.51	7,088.42	4,509.55	2,578.87
Corozal.....	2,463.90	417.84	2,881.74	2,126.40	755.34
Morovis.....	2,502.37		2,502.37	2,207.08	295.29
Toa Baja.....	8,246.64		8,246.64	6,346.07	1,900.57
Toa Alta.....	4,248.32		4,248.32	2,294.60	1,953.72
Dorado.....	10,256.28		10,256.28	3,121.29	7,134.99
Bayamon.....	18,542.65		18,542.65	13,819.88	4,722.77
Guainabo.....	4,187.40		4,187.40	3,434.32	753.08
Total.....	974,681.31	100,478.00	1,075,159.31	754,923.82	320,236.00

TABLE X.—School board finances—Expenditures classified, 1918-19.

Municipality.	Current expenses.					
	General control.				Instruction.	
	School board offices.		Supervision.		Salaries of teachers.	Supplies for home economics, manual training, etc.
	Salaries of employees.	Contingent expenses.	Additional salary of supervisor.	Expenses.		
San Juan.....	\$6,061.89	\$625.50	\$660.00	\$419.95	\$3,413.00	\$1,617.96
Rio Piedras.....	631.07	29.65	.....	255.00	1,200.00	263.53
Trujillo Alto.....	271.60	81.60	.....	255.00	115.50	17.01
Carolina.....	552.89	98.25	180.00	254.98	.....	197.34
Rio Grande.....	294.61	39.14	120.00	328.91	.....	388.26
Loiza.....	516.02	175.87	180.00	277.15	240.00	130.32
Fajardo.....	679.12	131.24	240.00	243.47	.....	424.39
Ceiba.....	286.71	148.22	.....	130.00	.....	.....
Luquillo.....	180.00	143.02	.....	130.00	75.00	28.68
Naguabo.....	286.55	50.43	.....	254.00	.....	168.29
Vieques.....	986.55	259.52	300.00	274.75	100.00	214.85
Humacao.....	552.23	151.42	240.00	405.42	.....	213.31
Las Piedras.....	232.13	107.77	180.00	249.00	.....	.....
Yabucoa.....	646.21	158.32	120.00	344.50	.....	293.12
Maunabo.....	210.75	135.91	120.00	271.45	.....	.....
Arroyo.....	276.98	206.76	.....	269.74	100.00	372.35
Patillas.....	320.49	175.61	.....	250.00	100.00	253.74
Juncos.....	305.03	140.00	300.00	272.49	.....	169.91
Gurabo.....	166.50	32.31	240.00	240.00	.....	353.19
Caguas.....	768.05	63.56	556.00	569.76	.....	456.81
San Lorenzo.....	209.71	54.42	.....	243.00	.....	147.45
Guayama.....	620.48	400.97	240.00	403.06	.....	185.80
Salinas.....	609.97	49.13	155.00	354.49	1,670.00	177.73
Santa Isabel.....	246.04	15.53	.....	279.80	2,000.00	31.37
Cayey.....	466.06	229.05	.....	353.92	.....	584.59
Cidra.....	218.56	109.50	.....	250.00	.....	.....
Comerio.....	615.10	165.84	125.00	318.16	70.00	376.87
Aguas Buenas.....	147.09	69.32	.....	125.00	.....	.....
Naranjito.....	112.59	67.68	.....	130.00	.....	.....
Aibonito.....	270.17	124.96	.....	396.22	.....	211.46
Barranquitas.....	164.83	31.00	.....	258.00	.....	.....
Barros.....	166.57	91.85	100.00	294.30	120.00	49.11
Coamo.....	553.53	228.92	100.00	358.06	.....	352.22
Juana Diaz.....	670.88	170.31	225.00	309.73	120.00	169.97
Villalba.....	73.90	61.66	.....	171.45	.....	.....
Ponce.....	1,472.02	220.61	840.00	873.56	150.00	865.67
Guayanilla.....	463.43	98.23	200.00	307.92	100.00	268.62
Penuelas.....	139.15	86.22	.....	250.31	.....	180.06
Yanco.....	702.68	262.91	240.00	420.69	.....	458.66
Guanica.....	598.70	242.34	300.00	290.33	2,190.00	124.92
San German.....	615.33	240.20	240.00	462.64	135.00	452.00
Sabana Grande.....	223.25	66.90	.....	252.00	.....	36.60
Cabo Rojo.....	540.31	147.66	141.00	285.99	.....	406.82
Lajas.....	443.72	111.09	200.00	286.70	.....	260.21
Mayaguez.....	2,930.23	158.38	460.00	323.26	1,000.00	462.11
Hormigueros.....	217.23	175.99	.....	240.00	.....	.....
Maricao.....	419.50	144.20	.....	280.69	400.00	406.03
Las Marias.....	423.46	174.95	.....	293.67	120.00	43.76
Anasco.....	342.13	35.72	110.00	397.94	.....	261.09
Rincon.....	202.98	38.00	.....	132.00	70.00	17.26
Aguada.....	361.70	165.35	180.00	148.75	.....	251.56
Lares.....	540.51	176.43	240.00	370.85	100.00	343.54
San Sebastian.....	390.48	95.20	240.00	304.51	.....	321.03
Aguedilla.....	484.36	37.14	120.00	321.90	.....	267.65
Moca.....	220.95	77.36	120.00	243.85	30.00	29.69
Isabela.....	298.80	130.17	.....	333.51	.....	322.54
Quebradillas.....	200.87	88.64	.....	270.40	.....	425.01
Utua.....	595.74	185.76	240.00	333.10	.....	301.09
Adjuntas.....	463.73	110.01	180.00	420.08	.....	217.81
Jayuya.....	261.95	146.34	120.00	256.38	.....	.....
Camuy.....	548.90	191.61	360.00	325.78	200.00	308.33
Hatillo.....	193.14	99.47	.....	260.20	98.00	31.39
Arecibo.....	978.27	222.90	700.00	426.25	100.00	989.35
Manati.....	910.65	225.13	165.00	416.80	.....	496.84
Barceloneta.....	785.15	216.77	165.00	297.50	.....	.....
Ciales.....	320.79	215.67	144.00	312.22	.....	446.19
Vega Baja.....	477.47	169.88	180.00	277.78	.....	499.78
Vega Alta.....	311.67	57.93	120.00	274.40	60.00	.....
Corozal.....	141.24	32.20	.....	290.91	90.00	100.66
Morovis.....	206.93	105.23	.....	254.02	.....	.....
Toa Baja.....	274.69	189.86	240.00	345.84	60.00	397.49
Toa Alta.....	181.12	116.82	.....	171.93	.....	.....
Dorado.....	212.80	100.42	.....	155.00	90.00	.....
Bayamon.....	829.74	225.89	250.00	297.50	150.00	740.60
Guainabo.....	259.47	137.06	30.00	266.00	70.00	32.51
Total.....	39,575.82	10,546.78	11,006.00	22,418.92	14,147.50	1,951.50
						18,616.00

TABLE X.—School board finances—Expenditures classified, 1918-19—Continued.

Municipality.	Current expenses.					
	Operation of school plant.				Maintenance of school plant.	
	Rent of school buildings.	Wages of janitors.	Janitors' supplies.	Miscellaneous, water, light, phone service, etc.	Repairs of buildings and care of grounds.	Repair and replacement of equipment, insurance, etc.
San Juan	\$5,680.00	\$10,842.00	\$681.25	\$1,546.86	\$4,616.65	\$1,958.59
Rio Piedras	1,452.00	666.00	110.08	200.13	187.97	319.00
Trujillo Alto	732.00	180.00	18.90	46.60	122.50	53.80
Carolina	1,904.00	380.00	18.67	63.26	835.06	50.67
Rio Grande	1,652.00	360.00	36.73	164.72	57.83	99.69
Loiza	2,160.00	350.08	144.79	107.90	37.00	448.86
Fajardo	2,060.00	1,440.00	178.69	158.80	1,589.13	513.74
Ceiba	960.00	100.00	60.21	98.13		90.31
Luquillo	1,272.00	120.00	31.87	38.75		98.79
Nagabo	1,236.00	450.00	15.92	114.90	42.67	43.21
Vieques	932.00	780.00	90.25	260.86	10,291.73	259.48
Humacao	2,604.00	1,404.00	89.82	276.19	1,011.27	258.22
Las Piedras	849.00	180.00	39.62	74.35		59.43
Yabucoa	3,292.40	510.00	27.73	131.26	407.40	75.26
Maunabo	753.00	180.00	47.27	86.77	58.10	70.92
Arroyo	1,044.00	370.00	44.68	85.05	19.06	121.28
Patillas	1,890.00	350.00	24.00	24.00	774.00	65.15
Juncos	2,486.10	480.00	16.04	286.07		43.55
Gurabo	1,639.60	330.00	33.41	66.47	8.45	90.69
Caguas	7,111.50	1,210.00	192.34	396.50	310.98	552.99
San Lorenzo	1,488.00	192.00	13.95	64.37	107.53	37.86
Guayama	3,168.00	1,398.00	78.23	232.18	902.87	224.91
Salinas	720.00	790.00	16.81	55.20	396.19	45.63
Santa Isabel	88.00	460.00	2.97	89.13	738.42	8.06
Cayey	1,340.00	690.00	55.30	30.82	202.69	160.10
Cidra	1,206.00	234.00	68.76	76.60	428.36	103.15
Comerio	1,176.00	310.00	35.65	400.67	1,759.13	96.77
Agua Buenas	432.00	180.00	18.56	94.55	467.76	27.86
Naranjito	327.00	80.00	17.17	66.00	4.82	25.77
Aibonito	1,006.00	330.00	20.00	140.83	130.00	54.30
Barranquitas	588.00	126.00	29.29	27.46	62.31	43.05
Barros	885.00	170.00	54.57	74.32	68.00	169.16
Coamo	2,527.62	646.00	33.60	157.00	1,072.57	91.20
Juana Diaz	1,110.00	456.00	71.58	1,047.92	240.13	205.75
Villalba	1,020.00		14.20			23.80
Ponce	5,411.40	5,776.00	364.49	1,214.68	991.06	1,047.92
Guayanilla	1,265.80	271.00	25.41	136.26	520.87	68.97
Penuelas	1,636.00	300.00	17.03	16.80	50.05	46.23
Yauco	1,852.00	840.00	193.12	222.07	711.39	555.23
Guamca	1,253.47	385.00	52.60	303.04	36.18	151.21
San German	2,698.50	680.00	190.31	473.16	173.70	547.16
Sabana Grande	1,104.00	240.00	3.46	85.00	26.00	9.40
Cabo Rojo	3,363.00	630.00	38.48	131.00	285.32	104.45
Lajas	873.56	304.00	24.61	9.80	877.50	66.81
Mayaguez	1,057.00	3,184.00	194.57	240.14	2,365.63	559.39
Hormigueros	910.00	120.00	25.88	30.42		38.82
Maricao	1,188.00	210.00	38.41	73.88		104.25
Las Marias	1,152.00	240.00	48.63	68.27	852.53	150.74
Anasco	1,144.50	540.00	24.70	95.27	181.54	67.30
Rincon	8 2.00	280.00	19.18	66.95	24.00	59.45
Aguada	1,111.00	340.00	23.80	107.29	555.40	64.59
Lares	2,475.00	690.00	32.50	144.48	128.53	88.21
San Sebastian	2,168.00	460.00	30.37	139.19	345.40	82.42
Aguadilla	1,524.00	821.00	112.69	128.03	697.56	323.99
Moca	949.50	180.00	22.99	117.36	290.54	102.24
Isabela	1,430.00	316.00	30.51	76.31	106.66	82.82
Quebradillas	846.67	180.00	40.20	71.68	136.20	103.12
Ututo	3,178.00	540.00	126.78	222.48	265.99	364.48
Adjuntas	2,403.00	416.00	20.60	193.00		55.93
Jayuya	1,805.00	120.00	44.39	147.21		66.59
Camuy	132.50	204.00	29.17	53.11	999.91	79.16
Hatillo	366.00	288.00	34.88	58.90	663.81	108.12
Arecibo	3,101.00	2,436.00	416.57	559.83	6,075.13	1,197.64
Manati	2,887.00	820.00	46.99	479.08	448.62	127.57
Barceloneta	1,657.12	476.00	149.26	142.05		223.80
Ciales	1,837.00	340.00	42.21	85.66	323.23	114.56
Vega Baja	1,700.66	441.00	47.28	401.06	248.90	128.32
Vega Alta	480.00	230.00	157.25	204.30	97.08	235.88
Corozal	210.00	240.00	9.52	41.64	99.67	25.85
Morovis	876.00	150.00	41.12	64.10	90.76	61.68
Toa Baja	1,163.00	580.00	37.60	535.21	3.30	102.06
Toa Alta	379.50	180.00	159.82	99.50	265.25	239.73
Dorado	1,449.73	200.00	81.82	171.50		122.74
Bayamon	5,136.00	1,610.00	311.83	732.05	50.04	896.51
Guainabo	1,370.00	176.00	36.12	86.94	185.18	111.97
Total	125,308.13	53,268.00	5,780.92	15,026.57	46,922.96	15,280.09
						2,564.51

TABLE X.—*School board finances—Expenditures classified, 1918-19—Continued.*

Municipality.	Current expenses,						
	Auxiliary agencies.						
	Library.		Athletics and playgrounds.		School lunch rooms.	School band.	
	Salaries.	Books, magazines, etc.	Salary of instructors.	Supplies.		Salary of instructors.	Supplies.
San Juan.....		\$2.00	\$150.00	\$1.50		\$400.00	\$14.27
Rio Piedras.....		90.00					\$100.00
Trujillo Alto.....		1.50					
Carolina.....		50.00					150.00
Rio Grande.....		2.50					
Loísa.....		2.50		18.00			
Fajardo.....	\$240.00	2.50				330.00	36.20
Ceiba.....							
Luquillo.....		1.50					
Naguabo.....							
Vieques.....		72.94		.80			
Humacao.....				54.61	\$62.35		
Las Piedras.....							
Yabucoa.....		2.50		8.00	124.86	400.00	49.96
Maunabo.....						250.00	12.50
Arroyo.....		8.00		1.50			
Patillas.....		2.50		20.19			
Juncos.....							
Gurabo.....							
Caguas.....		23.85					
San Lorenzo.....		2.50					
Guayama.....	240.00	44.62		8.50			
Salinas.....					222.58	400.00	14.51
Santa Isabel.....		19.50				360.00	165.00
Cayey.....							
Cidra.....							
Comerio.....		33.00				300.00	
Agua Buena.....		2.50					
Naranjito.....		2.50					
Aibonito.....							
Barranquitas.....		4.00					
Barros.....				18.90			
Coamo.....				82.00	21.25		
Juana Díaz.....		1.50		6.60		373.00	9.56
Villalba.....							180.00
Ponce.....	100.00		300.00	112.15		400.00	4.95
Guayanilla.....		2.50		24.00		30.00	
Penuelas.....							
Yauco.....				42.47	137.78	400.00	6.67
Guanica.....		88.88	200.00	49.26			150.00
San German.....	150.00	74.25			21.31	160.00	7.40
Sabana Grande.....		1.50					300.00
Cabo Rojo.....				1.35		400.00	22.10
Lajas.....		67.50		5.00			
Mayaguez.....	150.00	160.05		20.33			610.00
Hormigueros.....							
Maricao.....						270.00	18.03
Las Marias.....							160.00
Anasco.....						400.00	
Rincon.....		2.50			102.00	73.00	
Aguada.....		5.50				300.00	255.00
Lares.....		4.50			183.63		
San Sebastian.....		55.44					
Aguadilla.....							
Moca.....							
Isabela.....		2.50		7.10			
Quebradillas.....		2.50					
Utua.....		6.50		20.50	308.41		
Adjuntas.....		52.50				165.00	21.75
Jayuya.....							
Camuy.....		26.95					
Hatillo.....		2.50					
Arecibo.....		171.55					100.00
Manati.....		52.50					
Barceloneta.....		2.50					
Ciales.....		6.00					
Vega Baja.....		.86		14.70		150.00	24.95
Vega Alta.....				9.00		250.00	
Corozal.....							
Morovis.....		2.50					
Toa Baja.....		113.70					
Toa Alta.....		13.44					
Dorado.....		2.50					
Bayamon.....				23.55	70.00		
Gualnabo.....		2.50					
Total.....	880.00	1,296.53	650.00	559.01	1,254.17	5,781.00	2,170.00

TABLE X.—School board finances—Expenditures classified, 1918-19—Continued.

Municipality.	Current expenses—pension fund.	Capital outlay.			
		New sites.	New buildings.	Alterations in old buildings.	Additional equipment (not re-placement).
San Juan.....	\$2,104.70	\$1,391.75	\$80,379.39		\$16,480.74
Rio Piedras.....	149.80			\$1,260.66	285.31
Trujillo Alto.....	33.65	365.23			582.82
Carolina.....	84.31	404.54			2,296.22
Rio Grande.....	55.56				67.15
Loísa.....	68.73		684.79		2,680.78
Fajardo.....	109.12	5,281.98			662.65
Ceiba.....	24.36	1,100.00	442.50		175.00
Luquillo.....	29.06		322.28		194.80
Naguabo.....	61.77		583.35		1.00
Vieques.....	96.86			536.55	867.65
Humacao.....	122.60			282.11	1,088.66
Las Piedras.....	27.57		527.99		327.28
Yabucoa.....	79.09			5.00	2,170.26
Maunabo.....	26.57			82.90	294.62
Arroyo.....	33.00			25.00	173.11
Patillas.....	47.94	25.00			401.96
Juncos.....	61.17				186.23
Gurabo.....	41.20		50.00		204.26
Caguas.....	154.68			155.08	4,073.23
San Lorenzo.....	32.86				508.21
Guayama.....	136.61		1,181.70		2,258.51
Salinas.....	131.33		6,015.60		487.28
Santa Isabel.....	86.75		2,315.18		808.17
Cayey.....	80.28		6,080.81		498.28
Cidra.....	27.61				187.80
Comerio.....	63.17			13.00	735.65
Aguas Buenas.....	17.97				246.80
Naranjito.....	12.92		330.00		339.13
Albionito.....	36.01				432.86
Barranquitas.....	17.35			67.31	216.00
Barros.....	27.70			8.00	1,117.81
Coamo.....	54.64			300.47	1,234.46
Juana Díaz.....	91.19			56.65	480.86
Villalba.....	20.34				167.00
Ponce.....	1,044.19		5,208.62		1,413.60
Guayanilla.....	57.36			46.00	1,535.84
Peñuelas.....	36.99				227.14
Yauco.....	80.13			137.28	2,043.31
Guanica.....	121.90		2,208.73		2,064.66
San German.....	81.55			14.50	1,290.22
Sabana Grande.....	23.22	27.27			23.61
Cabo Rojo.....	71.19	1,000.00			680.23
Lajas.....	59.36			433.29	1,123.75
Mayaguez.....	515.91	750.00	32,091.24		782.33
Hormigueros.....	29.54		71.50		183.65
Maricao.....	45.91		525.48		672.68
Las Marías.....	47.51			8.00	1,456.13
Anasco.....	60.45		2,296.49		348.04
Rincon.....	28.01	21.63			219.27
Aguada.....	58.47			6.50	504.76
Lares.....	76.61			36.20	1,082.14
San Sebastian.....	63.86		659.51		1,062.35
Aguadilla.....	67.08			2,747.52	539.45
Moca.....	29.32	116.37			124.39
Isabela.....	39.62			22.94	555.23
Quebradillas.....	26.17			35.00	394.71
Utua.....	94.84			6.40	661.25
Adjuntas.....	57.80			79.00	1,682.66
Jayuya.....	33.35	600.00			128.29
Camuy.....	54.07		3,588.63		682.88
Hatillo.....	41.88			188.75	188.26
Arecibo.....	524.68			27.30	2,788.49
Manatí.....	90.48		3,042.20		832.77
Barceloneta.....	72.35		7,592.53		88.55
Ciales.....	55.19			10.00	352.77
Vega Baja.....	69.98			6.96	1,407.88
Vega Alta.....	45.51	498.55			994.47
Corozal.....	19.70			129.82	277.35
Morovis.....	23.94			15.00	315.59
Toa Baja.....	66.66		562.75		1,583.61
Toa Alta.....	25.80			15.80	415.49
Dorado.....	39.26				496.37
Bayamon.....	139.13			15.00	2,302.04
Guainabo.....	30.74	41.10			515.73
Total.....	8,416.13	11,633.42	156,746.17	6,723.99	75,665.90

TABLE X.—School board finances—Expenditures classified, 1918-19—Continued.

Municipality.	Payment of debts.			Total disbursements.
	Sinking fund.	Short-term loans.	Interest.	
San Juan.....	\$30,000.00		\$12,150.00	\$182,405.51
Rio Piedras.....				8,031.08
Trujillo Alto.....		\$225.00	19.79	3,147.30
Carolina.....				7,550.19
Rio Grande.....				3,667.10
Coiba.....				8,211.71
Pajardo.....		500.00	135.14	14,993.47
Seiba.....				3,616.84
Guayquillo.....		946.02	15.59	3,547.45
Vaguabo.....	1,500.00		607.50	5,416.59
Vieques.....				16,353.09
Humacao.....	3,000.00		1,350.00	13,059.58
Las Piedras.....				2,853.99
Vabucos.....				8,845.86
Mamabo.....		315.00	5.10	2,890.86
Arroyo.....				3,286.62
Patillas.....				4,714.48
Unicos.....				4,725.59
Jurabo.....		1,150.00	241.02	4,887.07
Aguas.....				16,975.38
San Lorenzo.....		450.00	60.57	3,655.43
Juayama.....				11,829.87
Salinas.....				12,310.40
Santa Isabel.....				7,707.86
Ayey.....	2,000.00		1,257.50	13,978.37
Idra.....		225.00	3.29	3,138.33
Comerio.....		500.00	65.88	7,159.89
Aguas Buenas.....		100.00	1.50	1,930.91
Varanito.....		133.33	26.00	1,674.91
Libonito.....		600.00	92.86	3,846.73
Sarranquitas.....				1,629.50
Jarros.....				3,415.29
Coamo.....				7,904.43
Uana Diaz.....				6,015.70
Ullalba.....				1,562.35
Once.....	14,000.00		3,780.00	45,710.16
Juayyanilla.....		297.97	4.42	5,624.60
Edueles.....				3,015.98
Sanco.....				9,420.39
Juanica.....		3,000.00	900.00	14,731.24
San German.....				8,995.23
Abena Grande.....				2,152.41
Abajo Rojo.....				8,318.80
Ajás.....				4,646.93
Layaguez.....	6,500.00		1,755.00	56,946.02
Formigueros.....				2,042.03
Varicao.....				4,957.21
Las Marias.....				5,079.71
Lasco.....		450.00	6.67	6,921.84
Lincon.....		400.00	76.57	2,716.50
Guada.....		330.00	24.90	5,194.57
Aras.....				7,603.54
San Sebastian.....				5,680.97
Guadilla.....		1,400.00	223.19	9,955.51
Loca.....		70.00	1.03	2,763.59
Abela.....				3,755.51
Uebradillas.....				2,826.87
Guando.....	1,500.00		877.50	9,849.12
Ujuntas.....				5,953.87
Ayuya.....				3,731.71
Amuy.....	1,000.00		405.00	9,199.13
Atillo.....				2,658.28
Recibo.....	3,000.00		810.00	24,860.36
Sanati.....		600.00	8.76	11,670.39
Arceoneta.....				11,868.67
Alas.....		450.00	30.15	5,120.64
Agua Baja.....				6,247.52
Agua Alta.....		450.00	33.51	4,509.55
Arrozal.....		400.00	17.84	2,126.40
Arrovis.....				2,207.08
Agua Baja.....				6,346.07
Agua Alta.....				2,294.60
Arado.....				3,121.29
Ayamón.....				13,819.88
Uainabo.....				4,434.32
Total.....	62,500.00	12,992.32	24,986.28	754,923.82

TABLE XI.—*Recapitulation of school board finances—Receipts and expenditures.*

RECEIPTS		
To balance deposited in the American Colonial Bank, Royal Bank of Canada, Banco Comercial de Puerto Rico and Crédito y Ahorro Ponceño in favor of the school boards, June 30, 1918.....		\$360,976.45
Total amount received by treasurers of school boards from July 1, 1918, to June 30, 1919:		
School fund.....	\$329,944.08	
School tax.....	238,065.20	
Interest on deposits.....	9,223.50	
Reimbursements.....	3,294.83	
Gifts.....	1,182.30	
Loan funds.....	42,000.00	
		623,711.81
Total amount retained by the Treasurer of Porto Rico during the fiscal year 1918-19 in payment of loans for the construction of schoolhouses:		
Principal.....	\$75,492.22	
Interest.....	24,986.28	
		100,478.50
		<u>1,075,159.81</u>
DISBURSEMENTS.		
Expenditures:		
A. General control.....	\$83,547.52	
Instruction.....	34,715.00	
Operation of school plant.....	190,383.62	
Maintenance of school plant.....	64,767.86	
Auxiliary agencies.....	12,825.55	
Pension fund.....	8,416.13	
Capital outlay.....	250,789.54	
Total amount retained by the Treasurer of Porto Rico during the fiscal year 1918-19, in payment of interest of loans for the construction of schoolhouses.....	24,986.28	
		679,431.50
B. Total amount retained by the treasurer of Porto Rico during the fiscal year 1918-19 in payment of principal of loans for the construction of schoolhouses.....		75,492.22
		754,923.72
Total disbursements.....		754,923.72
Balance.....		320,236.09
		<u>1,075,159.81</u>
To balance deposited in the American Colonial Bank, Royal Bank of Canada, Banco Comercial de Puerto Rico and Crédito y Ahorro Ponceño to the credit of the school boards, June 30, 1919.....		320,236.09

TABLE XII.—*Recapitulation of total expenditures.*

General control, office of department:		
Salaries—		
Administration.....		\$35,082.71
General superintendents.....		5,971.47
Contingent expenses.....		11,741.29
Instruction:		
Salaries—		
Supervisors of schools.....		51,315.57
Teachers—		
Elementary.....	\$1,275,944.62	
High school.....	89,313.22	
Vocational.....	43,189.60	
Total.....		1,408,447.41
Textbooks.....		27,419.47
School supplies.....		32,165.47
Summer institutes.....		1,906.11
Operation of school plant:		
Elementary schools—		
Rent.....		88.11
Contingent expenses.....		6,571.47
High schools—		
Wages of janitors.....		1,336.47
Contingent expenses.....		5,763.71
Auxiliary agencies, libraries.....		1,002.11
Capital outlay, new equipment.....		7,335.11
Teachers' pension fund.....		14,380.00
By transfers.....		3,894.11
School board expenditures.....		1,679,431.50
Expenditures by University of Porto Rico.....		162,221.11
Total expenditures for education, 1918-19.....		<u>2,467,778.11</u>

¹ For detail see Tables IX, X, and XI.² For detail see Exhibit No. 17 of Consolidated Financial Exhibits.

PART III.—SUPPLEMENTARY REPORTS.

This division comprises reports of the commissioner of education in his capacity as president of the board of trustees and chancellor of the university, as president of the board of trustees of the Carnegie Library, and as president of the board of trustees of the teachers' pension fund.

REPORT OF THE PRESIDENT AND CHANCELLOR OF THE UNIVERSITY OF PORTO RICO.**THE RIO PIEDRAS COLLEGES.**

For the University of Porto Rico the academic year 1918-19 has been an unusual and eventful one. The outstanding exceptional features of the year, in addition to the general war-time conditions, have been the organizing of the Students' Army Training Corps units, the epidemic of Spanish influenza, and the demobilization of the Students' Army Training Corps, with the accompanying reorganization of the work of the university. In spite of these abnormal conditions during the first semester, the year as a whole has been marked by very definite progress in certain respects and by normal accomplishment in general for the year, in addition to the special services that all universities and colleges were privileged to render during the war.

Since the end of the preceding academic year there have been 20 changes in the personnel of the faculty, nine of the newly appointed members being professors or assistant professors and most of them heads of departments. Of the new members of the faculty four have the degree of doctor of philosophy and two the master's degree in arts and science.

The university has been very fortunate in these new acquisitions and also in the fact that few resignations are expected for next year. This stability in the instructional staff will be most favorable.

Credit is due to certain members of the faculty for contributions to educational literature and for research work begun. Associate Dean Janer's Spanish grammar is an exceptionally fine work and is the first of a series of texts, which will be of value to all students of Spanish.

Miss Seals's arithmetics for the public schools of Porto Rico are another notable contribution. These books are thoroughly practical and form models of modern textbook principles in arithmetic, especially in the elimination of unessential material, the systematic and carefully planned drill and review exercises, and above all the excellent adaptation of the general material, illustrations, and problems to the interests and needs of Porto Rican pupils.

Several other members of the faculty are engaged in the preparation of books in professional or other fields.

The faculty of the Normal College, including that of the practice school, has maintained a Normal College section in the Porto Rico School Review, contributing several articles every month on practical elementary-school problems and methods.

Prof. Colon, with the assistance of one of the advanced students in the College of Liberal Arts, has continued, and will probably conclude next year, an investigation for the perfecting of a more economical method for the determination of potash in commercial fertilizers and another on a special method for the determination of available phosphoric acid in fertilizers.

Dean St. John has completed and published a study of errors in the spelling of English and methods of teaching English spelling in Porto Rico, with some accompanying observations on errors in grammar. These articles, published in the Porto Rico School Review, have received special mention in educational magazines of the continent.

The organization of the Students' Army Training Corps unit involved serious difficulties. The great irregularity in mail service between the continent and Porto Rico in the late summer and early fall resulted in the nonreceipt of the descriptive bulletins giving even the preliminary information as to the conditions of induction and the principles and details of the military and academic organization until some time after the beginning of the academic year and the complete organization of work on the previous normal basis. The fact that the date of the last military registration in Porto Rico was six weeks later than on the continent necessarily postponed the date of inductions into the Students' Army Training Corps. The entire absence of dormitories necessitated the conversion of the manual-training shops into barracks and the discontinuance of the manual-training classes until they were provided for in the public schools of Rio Piedras.

Inductions into the Students' Army Training Corps began on the day following the military registration day, and the first inductions were completed on November 4.

All Students' Army Training Corps work was in full operation by the time of the last induction, although the barracks building was not ready for occupancy for several weeks, and the orders for demobilization arrived one week after its use began. An effective system of supervised study in the evenings was in operation from the first.

Immediately after the demobilization of the Students' Army Training Corps the university renewed its request to the War Department for the authorization of two units of the Reserve Officers' Training Corps—One at Rio Piedras and one at Mayaguez. This was promptly approved, and the units were organized at once and have been in normal operation throughout the second semester.

Aside from the military-training unit the special war service of the university at Rio Piedras has consisted mainly of substantial financial aid to the Red Cross (of which every student is a member) and other agencies, liberal purchases of Liberty bonds by the faculty, the students, and the various organizations of the university, the making of hospital and other garments and articles for soldiers, special war-time courses in food conservation, and various measures for war publicity and information.

The present honor roll of the university at Rio Piedras—certainly incomplete—contains the names of 10 members of the faculty and of 131 students and former students who were in the military service during the war.

The Rio Piedras colleges had the great good fortune to suffer no direct losses of any kind and very little disturbance from the serious earthquake of October 11, which had such disastrous effects in other parts of Porto Rico, including the Mayaguez departments of the university. Except for the temporary discontinuance of general convocations of students, the university work and general activities proceeded regularly after the day on which the first severe shock occurred.

The students and faculty of the university assisted the earthquake sufferers with financial aid administered through the Porto Rico Chapter of the Red Cross, and a large number of garments for the earthquake refugees were made by the home economics students.

The epidemic of Spanish influenza necessitated the closing of the Rio Piedras colleges for the three weeks immediately preceding the Christmas vacation. The date of ending of the first semester was advanced one week on this account, the second semester being shortened by one week.

As to material equipment, a substantial advance has been made by the conversion of certain rooms, formerly used for shower baths, lockers and storerooms, into a large chemistry laboratory capable of accommodating 50 students at a time, with good storerooms and adjoining science demonstration room and lecture room, and the suitable equipping of two adjoining rooms to serve as a biology laboratory and a biology lecture room, both sufficiently large to meet immediate needs. A notable advance has been made in the provision of equipment and apparatus for the departments of biology and physiology.

The university is still sadly in need of a modern science building. The present accommodations are insufficient to provide properly for the growth which is to be expected at once under restored normal conditions, and which will undoubtedly make heavier demands upon the science departments than upon any other. The need is great also for a large library building containing recitation and class rooms, and a large auditorium, a suitable gymnasium for women, a building for music classes, which might be inexpensive and which surely should be fairly remote from the other buildings, and finally, residences for the faculty. The last-mentioned item is of considerable importance. The very great difficulty of securing accommodations in Rio Piedras results in the dispersal of the faculty over the entire 7-mile region between Rio Piedras and San Juan, which in turn not only is a cause of great inconvenience and dissatisfaction for the faculty but also seriously handicaps the extra-classroom activities of the university, and even to a certain extent the most direct regular work. There will be neither a permanent and contented faculty nor a whole university, in the proper sense of the term, until faculty residences are available at Rio Piedras.

The legislature had included in the general appropriation act of 1918-19 an appropriation of \$40,000 for the erection of a law and pharmacy building. However, the construction of this building was not undertaken, because the appropriation was made in contravention to the organic act as shown by the following extract from a letter received from the office of the auditor of Porto Rico: "I have the honor to advise you that under the opinion of the honorable the attorney general of Porto Rico this appropriation was not legally made. It never was available and hence is not available at the present time. This with other appropriations was made in excess of the estimated income for that year and there was no legislation providing for additional income. Hence, as per the opinion of the attorney general, they were in direct conflict with the organic act and therefore were considered as not having been legally made."

Mention should be made of the proper innovation of keeping the library open evenings, Monday to Friday, from 7 to 9.30. The students and faculty have appreciated and made good use of this opportunity, and the library has been well attended in the evening.

In view of the demand for trained pharmacists in Porto Rico and of the relatively small number of students attracted by the present three-year courses, and in accordance with the usual practice in similar institutions, the work in the College of Pharmacy has been reorganized to offer, beginning in September, 1919, a two-year course leading to the degree of graduate pharmacist and a supplementary course of one year leading to the degree of pharmaceutical chemist. The supplementary course includes advanced work in physiological chemistry, food and drug analysis, and commercial pharmacy, planned to prepare for the more responsible positions in pharmacy and to meet the needs of prospective proprietors of pharmacies and of analysts. This change will enable the College of Pharmacy to render a much greater service to Porto Rico.

The courses in the College of Liberal Arts leading to the degrees of bachelor of arts and bachelor of science, the premedical course, and the Normal College courses leading to the degree of bachelor of arts in education and preparing for high-school teaching, principalships, and for supervision have all been much more definitely systematized. The course leading to the normal diploma has been slightly revised, the principal changes being the introduction of a year's study of the principles of sociology and of the social and economic problems of Porto Rico and the introduction of some observation of teaching and of practice teaching in the second semester of the first year.

The resolution of the board of trustees authorizing the granting of the degree of bachelor of science by the College of Liberal Arts at Rio Piedras is sure to have favorable effects in stimulating the study of the natural sciences from a nontechnical viewpoint.

The College of Liberal Arts faces a problem rather unique for American universities. This problem is a consequence of the apparent lack of comprehension among Latin-American countries of the significance and value of a liberal education. In Porto Rico there is a very marked tendency to select distinctly professional or technical work for the field of college or university studies and to follow the shortest and most direct route into that field without first laying the foundation in general liberal or cultural education of a collegiate character, which is regarded as properly a side issue to be cultivated in the intervals of distinctly professional study. The College of Liberal Arts of the university has a vital mission in the inculcation of the idea and the ideal of liberal education.

The university is now taking the first step in the training of Spanish teachers for schools and colleges on the continent. The tremendous impetus given to the study of Spanish in the United States during the war and after it opens a rich opportunity to Porto Ricans. Teachers of Spanish for American schools and colleges have been, and are now being trained in the university—some of them Porto Ricans and some continental Americans. It is expected that within a short time the university will send to the States every year a group of young Porto Ricans especially prepared for this work.

A second very attractive field—that of Latin-American commerce—is closed to the university until more funds are available. A good college of Latin-American commerce in Porto Rico would be a Mecca for Latin-American countries and for continental United States, and would open brilliant opportunities to the young people of Porto Rico. To undertake the organization of such a college with only the present material accommodations and resources of the university would be impossible.

COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

The year 1918-19 which opened under unusually favorable auspices, was the most critical year the College of Agriculture and Mechanic Arts has ever experienced. In spite of the steady drain of men upon both faculty and student body during the preceding year for war service, for filling the gaps in the teaching forces of high schools and for manual training teachers, and notwithstanding offers of good positions in other occupations, the enrollment showed a decided increase. The necessary steps had already been taken to secure both the collegiate and vocational sections of the Students' Army Training Corps and an option had been secured on a desirable building or barracks. The board of trustees had at the request of the commissioner of education voted to maintain classes for the preparation of rural teachers, as a still further contribution to meet the necessities of Porto Rico, with a resulting enrollment of 127.

On October 11 the earthquake changed the entire outlook. The Degetau Building of 20 rooms took fire from the explosion of chemicals released by the shock and was totally destroyed. A considerable portion of the furniture and apparatus of the first floor was saved but the chemical, the bacteriology, and plant pathology laboratories of the second floor were a complete loss. The science building stood the quakes with comparatively little damage. Fortunately there was no loss of life. Special

mention should be made here of the heroism of the students who worked in a rocking and burning building to save equipment even where burning brands dropped from the floor above them. The city of Mayaguez was virtually wrecked so that it was impossible for many to find places to stay while the continued quakes of the whole west side of Porto Rico caused many parents to send for their sons to return home. Still, after a week's recess, the college resumed work. Every place available for classes was utilized, even the shade afforded by the mango trees.

On October 24 at a joint meeting of the governor, Capt. Denoist representing the War Department, and the board of trustees, it was decided to proceed with the Students' Army Training Corps. Temporary buildings for the necessary barracks, mess hall, and baths, in lieu of the building previously secured, were at once erected at a cost of \$15,000. Upon receipt of the order of demobilization these quarters were converted into laboratories and classrooms.

Eighty-seven men were examined for the Students' Army Training Corps. Due to the late registration date in Porto Rico, October 26, only 40 had had their papers approved and had been formally inducted when the order to demobilize was received.

The epidemic of influenza which resulted in the closing of all the public schools in December was felt less severely by the student body of the college so that this was the only institution in Porto Rico that remained in session. The general spirit of "carry on" shown by the faculty and student body of the college during the whole period of disaster, sickness, and the building up of interest and morale necessary afterwards deserves the highest commendation. It would be hard to find a more loyal body of students than those who returned to take up their work with greatly diminished facilities but with the determination to make a successful year in spite of all they had gone through. The continuation of the work of the college was made possible through the assistance rendered by the agricultural experiment stations, the Institute of Tropical Medicine, and the departments of the university at Rio Piedras in reestablishing the laboratories.

After the demobilization of the Students' Army Training Corps, a unit of the Reserve Officers' Training Corps was established.

At a special session of the legislature the sum of \$15,000 and at the general session an additional sum of \$35,000 were appropriated for rebuilding the Degetau Building. Plans are being prepared and construction will begin as soon as possible. A special appropriation of \$15,000 to replace the laboratory equipment destroyed was also made. These amounts, however, are insufficient to cover the total losses resulting from the earthquake and fire.

The following changes to secure greater efficiency have been decided upon:

1. The adoption of 15 units of high-school credit for admission to collegiate rank in lieu of the high-school diploma. The high-school diploma at present requires 18 units. The standard of the best institutions in the States is 15 units, and there exists no reason why a higher standard should be required here. Of these 15 units, 12 are required—3 in English, 3 in Spanish, 2 in science, 2 in mathematics, 1 in history, and 1 in manual training or domestic science. The other 3 may be offered from any of the high-school subjects. Three years of language other than English will be accepted in place of Spanish from those whose mother tongue is not Spanish. The unit in manual training or domestic science must represent at least two years' work.

2. The adoption of 120 credit hours as the standard for the subcollegiate diploma in agriculture or polytechnic science above the completion of the ninth grade. This represents four years' work above the common-school course and allows a certain degree of flexibility in the choice of work.

3. The board of trustees has authorized the degree of bachelor in general science for which the entrance requirement is 15 units of high-school work and the requirement for graduation is 120 hours, of which 50 shall be in science. The student must select, by the close of his freshman year, a major and two related minors and secure 20 hours' credit in the major and 10 in each of the minors; the other credit hours are elective.

The following recommendations are toward the greater use of the facilities at hand:

1. The rearrangement of the courses into a school year of four quarters of 12 weeks each. This would eliminate the summer vacation of three months and add 25 per cent to the use of the investment in equipment and buildings. It would enable a student to cover the four years in three and thus add a year to his earning capacity of life. It would enable teachers in the public schools to take courses during the vacation and prepare themselves for higher positions. At present one of the most serious drawbacks to permanency in the teaching profession is this lack of opportunity for advancement. It would also enable members of the faculty to take their vacation at different quarters of the year, giving them opportunity for advanced study in the States. There seems to be no reason against the change except the inertia of custom and lack of funds.

2. The equipment of a steam laboratory for practical work in steam engineering.

3. Suitable legislation to enable the board of trustees to issue bonds for the construction of buildings for the University of Porto Rico as needed. At present the school board of the smallest towns in Porto Rico enjoys a right denied to the university, that of borrowing money for the construction of buildings. Neither the Federal funds nor the trust funds can be utilized for construction of buildings for that purpose. A small general tax of even one-tenth of a mill would give a fund of \$25,000, which could be a guaranty for sufficient loans to erect the buildings that may be needed in the near future.

4. The extension of the provisions of the Smith-Hughes law to Porto Rico, giving an increased impetus to vocational training. A joint resolution of both Houses of Congress would bring the desired result.

5. The establishment of an engineering experiment station. There is at present no such station in the Tropics. The influence of tropical conditions on engineering work is recognized, but no effort has been made to work out a determination of these conditions upon a scientific basis.

6. Extension work in agricultural instruction. There should be an agricultural supervisor for every municipality. Agriculture is the sole basis for wealth in Porto Rico, but at present it is far from being on a scientific basis. There would be no lack of young men for these positions if there were any assurance that the positions would be provided.

7. Additional land. The purchase of the tract of land of some 50 acres adjoining the college grounds is necessary for the proper development of the agricultural work.

8. The college should be given the necessary authorization to erect bungalows for the faculty. Such action would not only relieve to some extent the scarcity of houses in Mayaguez, but would do much to promote a community life for the institution.

University enrollment, 1918-19.

Rio Piedras departments:	
College of Liberal Arts.....	30
College of Law.....	33
College of Pharmacy.....	19
Normal College.....	245
College specials.....	22
High school.....	136
High school specials.....	9
Elementary Practice School.....	309
Total.....	803
College of Agriculture and Mechanic Arts, Mayaguez:	
Collegiate—	
Agriculture.....	35
Engineering.....	9
Sugar chemistry.....	12
Freshmen (same for all courses).....	62
Special.....	16
Total.....	134
Subcollegiate—	
Agriculture.....	24
Polytechnic.....	88
Total.....	112
Rural teacher's course.....	127
Total at Mayaguez.....	378
Grand total for university.....	1,176
Of college rank.....	351

DEGREES, DIPLOMAS, AND CERTIFICATES GRANTED 1919.

Rio Piedras departments:	
Bachelor of science.....	2
Bachelor of law.....	0
Pharmaceutical chemist.....	5
Normal diplomas.....	27
Rural teacher's certificate.....	77
High school diploma.....	24
Total.....	135
College of Agriculture and Mechanic Arts:	
Bachelor of science in agriculture.....	7
Bachelor of science in civil engineering.....	2
Bachelor of science in mechanical engineering.....	2
Bachelor of science in sugar chemistry.....	4
Subcollegiate diploma in agriculture.....	7
Rural teacher's certificate.....	98
Subcollegiate diploma in polytechnic science.....	13
Total.....	133
Grand total.....	268
Degrees of full college rank.....	22

DELEGATE TO NATIONAL EDUCATION ASSOCIATION.

The board of trustees of the university authorized and directed the chancellor to attend the forty-ninth annual meeting of the department of superintendence of the National Education Association, which was held in Chicago, February 24 to March 1, 1919, as the official representative of the university, paying his traveling expenses and subsistence during the time necessarily spent in the United States on official business. This action of the board is highly appreciated, for it enabled the head of the school system to attend and participate in the activities of the National Education Association and to inform himself at first hand of the most recent educational thought and movements.

THE UNIVERSITY'S GREATEST NEED—FINANCIAL.

There is great need for legislation to place the university on a stable financial basis by designating a permanent and fixed source of revenue (sufficient to provide for its maintenance and regular growth) and freeing the institution from the uncertainty of relying upon special legislation at each session of the legislature.

The most immediate problems connected with the development of the university are financial.

BOARD MEETINGS.

The board of trustees of the university has held during the year the four regular quarterly meetings required by law and seven special meetings. The general interest manifested by the trustees in the business of the university is shown by the fact that no member has been absent from more than one of the regular meetings held by the board and that three members have been present nine times. The deans have materially aided the board in the transaction of business by their presence and oral as well as written recommendations. Moreover, every action taken by the board with only two exceptions has received the unanimous vote of those present and voting. The committee on legislation prepared several bills for presentation to the legislature, but were not able to secure favorable action on any of them.

REPORT OF THE PRESIDENT OF THE BOARD OF TRUSTEES OF THE CARNEGIE LIBRARY.

AUGUST 1, 1919.

I have the honor to submit herewith the annual report of the Carnegie Library of Porto Rico for the year ended June 30, 1919.

The total accessions during the year have been 3,596 books, distributed as follows:

Spanish books:		English books:	
By purchase—		By purchase—	
Nonfiction.....	462	Nonfiction.....	320
Fiction.....	1,707	Fiction.....	460
By gift.....	83	By gift.....	55

The number of daily patrons averaged 153.

Judging from the limited number of daily patrons, it appears that the public at large is not availing itself fully of the facilities offered by the library and that much remains to be done to extend the opportunity for information and culture offered by this institution.

The reports from the custodians of the different collections indicate that the traveling library system has proved a success. Each collection consists of a case of from 50 to 100 books, according to the population of the community which it is to serve. The number of cases has been increased to 50. In addition thereto books have been sent to the reform school at Mayaguez and to the Arecibo jail, and arrangements are being made to supply the penitentiary at San Juan.

Another means of circulating books now in vogue is the parcel post. Advertisements have been placed in the leading newspapers, listing the new books received and expressing a willingness on the part of the library to send them to any part of the country, provided the borrowers pay the transportation charges. This system has caused an increasing demand for books from other localities.

Following are some of the methods employed to stimulate the circulation of books in San Juan:

Attractive book covers have been displayed in the showcases of several stores in the city.

Books of special interest have been placed on separate shelves with distinctive colored labels so as to attract the attention of visitors.

Classified lists of popular and interesting books have been sent to the readers.

The following paragraphs will indicate some of the other activities and methods employed by the library:

Agreements have been made to provide regular loans of books to the University of Porto Rico for the use of the students.

The reference collection has been divided. Books generally used by common and high school students have been placed in one room, while those intended for more serious study have been assigned to a separate alcove.

Special efforts have been made to beautify the children's room; plants and goldfish bowls have been installed to make it more attractive to juvenile patrons.

The installation of an electric bell system from the office of the librarian and assistant librarian to the several departments of the library has greatly increased the efficiency of the service.

The services of a former student of the library school of Columbia University have been secured. In addition to cataloguing all new accessions since her connection with the library she has done a great deal of catalogue revision.

The library gave the use of two of its rooms to the Porto Rico Chapter of the American Red Cross for the preparation of surgical dressings. The assembly room has been freely used for meetings and conventions for the "Sociedad Protectora de Mendigos," the "Asociación Médica de Puerto Rico," the "Asociación de Ingenieros," and other societies and bodies.

A special campaign worthy of being mentioned here because of the leading part assumed by the library was the so-called book drive of "El Libro del Soldado." This campaign was very similar to those carried on in the States to obtain books, magazines, and money to spend in library activities for the soldiers during the war. A group of society girls presided over by Miss Diana Yager, daughter of the honorable governor of Porto Rico, and under the direction of the former librarian, Dr. Manuel Fernández Juncos, took charge of this interesting movement, which was carried out with admirable success.

Financial statement fiscal year 1918-19.

	Credits.	Expenditures.	Balances.
Salaries.....	\$7,560.00	\$6,405.40	\$1,154.60
Incidentals.....	8,000.00	4,926.79	3,073.21
Total.....	15,560.00	11,322.19	4,227.81

Detail of expenditures.

Personnel:			
Librarian.....			\$500.00
Assistant librarian.....			1,173.33
Cataloguer.....			170.00
Clerk, \$900.....			887.50
Clerk, \$800.....			900.00
Clerk, \$720.....			720.00
Clerk, \$600.....			595.83
Clerk, \$1,500.....			618.74
Janitor, \$420.....			420.00
Janitor, \$420.....			420.00
			\$6,405.40
Contingent expenses:			
Books—			
Spanish.....	\$991.94		
English.....	1,007.32		
		1,999.26	
Periodicals—			
Spanish.....	79.38		
English.....	218.80		
		298.18	
		6.50	
Furniture.....		539.00	
Lighting.....		638.80	
Extra help.....		1,446.65	
Sundries.....			4,926.79
Disbursements.....			11,322.19
Balance.....			4,227.81
Regular appropriation for the year ending June 30, 1919.....			15,560.00

REPORT OF THE PRESIDENT OF THE TEACHERS' PENSION BOARD.

The teachers' pension act went into effect January 1, 1918. All teachers contribute 1 per cent of their salaries. School boards in municipalities of the first class contribute 2 per cent of their receipts and those of the second and third class, 1 per cent.

By virtue of a recent act of the legislature the funds of "La Egida del Maestro," amounting to \$6,100.56, were turned over to the teachers' pension fund. The total amount of this fund at the time this report was written was \$30,242.47. Seven pensions have been granted to date.



JUNIOR RED CROSS OF PONCE HIGH SCHOOL.



RAFAEL M. LABRA GRADED SCHOOL, SANTURCE, SAN JUAN.



ROMÁN BALDORIOTY DE CASTRO GRADED AND TECHNICAL SCHOOL, SAN JUAN.



232-2

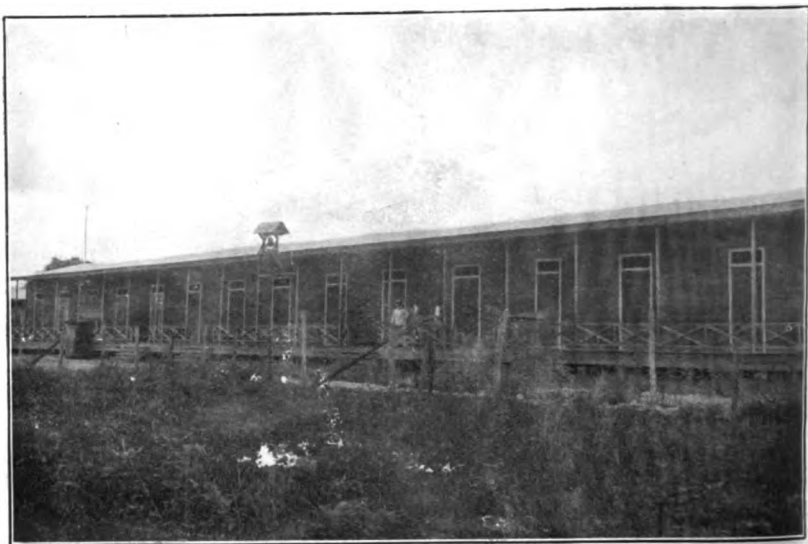
RAFAEL CORDERO GRADED SCHOOL, SANTURCE, SAN JUAN.



PADRE RUFO GRADED SCHOOL, SANTURCE, SAN JUAN.



MAYAGUEZ GRAMMAR SCHOOL MAYAGUEZ.



PLAYA SCHOOL, MAYAGUEZ. TEMPORARY FRAME BUILDING ERECTED AFTER EARTHQUAKE.



ADMINISTRATION BUILDING, LIBRARY AND OFFICES OF SCHOOL BOARD AND SUPERVISOR, MAYAGUEZ.



MAYAGUEZ HIGH SCHOOL, MAYAGUEZ.



PONCE DE LEÓN GRADED SCHOOL, HUMACAO. OLD FOUR-ROOM TYPE
REMODELED AND ENLARGED.



CONCORDIA GRADED SCHOOL, PONCE.



LUIS MUÑOZ RIVERA GRADED SCHOOL, CAYEY.



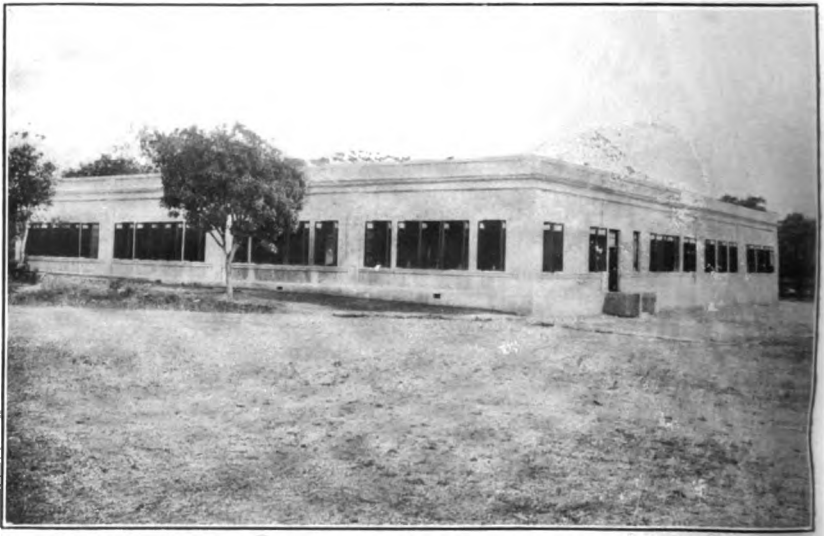
DR. J. C. BARBOSA CONSOLIDATED RURAL SCHOOL, VIEQUES.



JOSÉ PABLO MORALES GRADED SCHOOL, TOA ALTA.



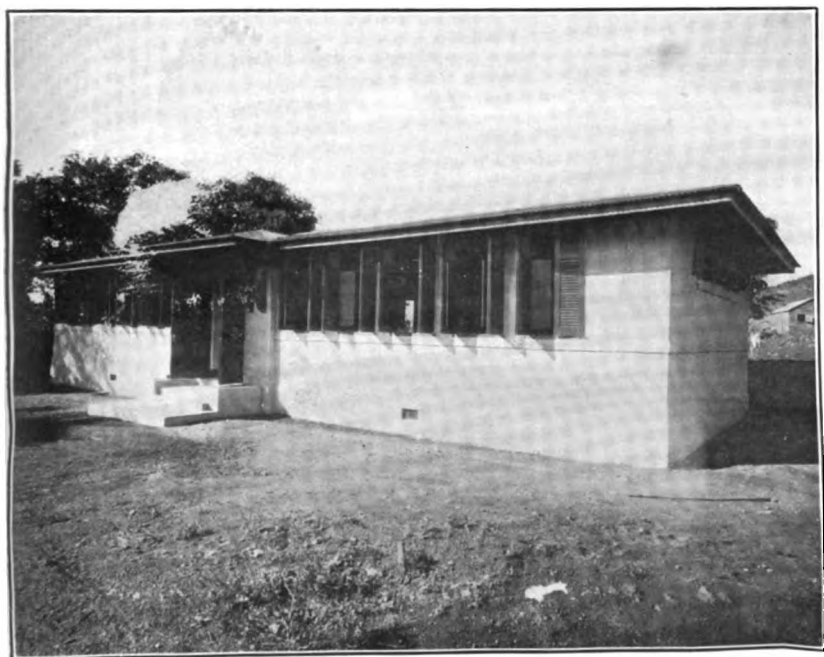
WOODROW WILSON CONSOLIDATED RURAL SCHOOL, AGUIRRE, SALINAS.



MANUEL FERNÁNDEZ GRADED SCHOOL, JUANA DÍAZ. SIDE AND REAR VIEW



FEDERICO DEGETAU CONSOLIDATED RURAL SCHOOLS, SANTA ISABEL.



CAÑOS CONSOLIDATED RURAL SCHOOL, GUÁNICA.



232-10

MATIAS GONZÁLEZ GARCÍA GRADED SCHOOL, GURABO.

APPENDIX VIII.

REPORT OF THE ATTORNEY GENERAL.

OFFICE OF THE ATTORNEY GENERAL,
San Juan, P. R., August 1, 1919.

HONORABLE GOVERNOR OF PORTO RICO:

I have the honor to submit herewith my fifth annual report as attorney general of Porto Rico. This is the nineteenth annual report of the department of justice of Porto Rico and covers the fiscal year ending June 30, 1919.

The fiscal year 1918-19 has, like the preceding year, been one of great activity and interest in the history of the department. The most interesting features of the year were the continued war activities of the department, which will be discussed hereinafter under appropriate headings.

In accordance with your request a general study of the evolution and progress made in the different services under the jurisdiction of the department and a brief analysis of the situation compared with conditions prevailing during the Spanish régime at the time of the change of sovereignty, has been made, and, I think that this study will be convincing that the services under the department of justice of Porto Rico have kept pace with the services in all other branches of the insular government during these two decades of American Government. Moreover the department of justice, and especially the office of the attorney general has had an intimate relation with the progress of the services of the government. Throughout this period the office of the attorney general has assisted in the drafting of legislation, for all branches of the government, and in the preparation of rules and regulations and the decision of questions of policy affecting all departments. From the date of the taking effect of the first organic act of Porto Rico, May 1, 1900, until the second organic act went into effect on March 2, 1917, the attorney general was, ex officio, a member of the executive council, which was not only the upper house of the legislative assembly of Porto Rico, but also was charged with many important executive and administrative responsibilities.

CONDITIONS IN THE ADMINISTRATION OF JUSTICE AND PRISONS PREVAILING AT THE TIME OF THE AMERICAN OCCUPATION.

It is difficult to make any adequate comparisons of the conditions prevailing during the later years of Spanish rule in Porto Rico with the conditions that exist to-day in the administration of justice and of the penal institutions, inasmuch as no adequate statistics are available as to the conditions existing during the years immediately prior to the American occupation.

The reports of the military governor of Porto Rico on civil affairs during the first years of American occupation show a deplorable condition at that time, due to the great confusion caused by the changing of sovereignty and to the introduction of new and more liberal measures in the administration of justice as will be pointed out later. The record of progress was rapid and consistent after the civil government had become finally established and the American system of administration of the criminal laws was adopted, however.

There are many inconsistencies in the reports of the conditions which existed in the administration of justice immediately prior to and during the early period of American occupation, when the old system of laws and procedure prevailed. In the Annual Report of the War Department for the fiscal year ending June 30, 1900, part 13, containing the report of the military governor of Porto Rico on civil affairs, it is stated in one paragraph (p. 57):

"Spain's most bitter enemy and detractor, if well informed and sincere, could not but admit that as respected maintenance of public order and the protection of persons and property the condition of Porto Rico during the last year of Spanish rule compared favorably with the best-governed countries in the world."

And yet in another paragraph in the same chapter there is the following statement (p. 63):

"The courts of the island are probably the same as are the Spanish courts everywhere, more or less corrupt and inefficient; at least Spaniards themselves have so asserted

respecting all these local tribunals. These abuses, however, will disappear if local public opinion demands it, and if that sentiment does not force a reform in procedure, then it will be useless to try and save the malady of the limb by cutting off the member. If public sentiment does not demand a pure and independent judiciary, the island will never have it, for no stream can submerge its own source."

And in the next chapter it is stated (p. 78):

"The judicial system has already been outlined, but its procedure was excessively slow, encumbered with many formalities, and in the hands of a skillful litigant could be employed to exhaust the patience and the purse and defeat any cause regardless of its merits. As heretofore stated, the writ of habeas corpus was unknown. The secretary of justice was the arbiter of the courts, and had even absorbed some of the functions under the law belonging to the judiciary. No judge could obtain leave of absence, even for a single day, without his consent. The jury system was unknown and of doubtful expediency. It was also observed that a very considerable proportion of the petitions praying for judicial reforms were directed against the bench, suggesting methods of impeachment for malfeasance and corruption, and generally indicating a lack of confidence in the judges."

And in a subsequent chapter the following statement is made (p. 101):

"Those who comment adversely upon Spanish administration of justice assert that their rule was one of great rigor, the civil guards being the agents for enforcing this rule. The accounts of their cruel practices tell of a condition that is scarcely conceivable, even if the stories told are somewhat exaggerated. One method of extorting information has already been described. The accounts might be greatly extended.

"The island was peaceful and crimes against persons and property were far less prevalent than they have been since, but the peace and good order were secured apparently by the same means that they are secured within the walls of a prison, where all save guards are criminals.

"With the departure of the Spanish authorities and rule came a swing of the pendulum to the opposite side. The pressure was released and society exploded. They have never learned that there could be a rule of order or well-being with subjection to the ordinary requirements of organized society. They could not conceive of a government not maintained by force. Observance of laws made to secure common benefits they would enjoin, but almost every one seemed to be ready to violate these laws in order to promote selfish ends or to injure an enemy.

"Hostilities had just ended, and all affairs were in a very unsettled condition. The procrastinations in judicial administration were so notorious that hope was not justified of securing action by the courts for many months in cases that had already been long awaiting investigation. The jails were crowded with prisoners of both sexes and all ages and classes, the greater portion of whom had been held for long periods, many for years, on petty or trifling charges, or none at all, and prayers of victims for speedy trials were ignored. Reference of the reports of inspector to the head of the department of justice brought the statement of the native secretary at the head of that department to the military governor in effect that the reports were either false or exaggerated and that there were no prisoners in jails who should not be there, but notwithstanding the same secretary, of his own motion, ordered extensive jail deliveries, and several hundred prisoners, many guilty of grave crimes, were set at liberty without any hearing whatever. He also demanded the dismissal of the inspector, but this was refused.

"Many prisoners confined without charges or for light offenses were released. The courts were enjoined to clear their dockets, and the number of prisoners confined in the island was reduced from over 3,000 to less than 900. The number of jails was reduced from 11 to 5.

"The sanitary condition of the jails, which had been indescribably filthy and horrible, was radically changed. Shops for the employment of the convicts in the insular penitentiary were established and equipped, and brooms, hats, shoes, and other clothing were manufactured in quantity not only sufficient to supply the prison and all the jails, but as well to justify competition for supplying some articles to inmates of the orphan and insane asylums."

The military governor of Porto Rico took a very pessimistic view of the possibility of ever establishing in Porto Rico an American system of justice. While the last 20 years have shown conclusively that the Porto Ricans had the capacity to organize and properly administer such a system, which now includes the jury, the grand jury, the writ of habeas corpus, injunctions, mandamus, quo warranto, American Codes of Evidence, of Criminal Procedure and Civil Procedure, and American Political Code and Penal Code, nevertheless the views expressed by the military governor in 1900 are of historical interest.

The following extracts are quotations from chapter 6 of the above mentioned report: "Section 40 of the act of Congress respecting Porto Rico, approved April 12, 1900, contained provisions for the codification of the laws of the island. These laws are understood to be—

"1. The laws of the land of Spanish origin not locally inapplicable, as well as the statutes specifically applied to Porto Rico by royal orders or decrees, except as abrogated or modified by military orders and decrees in force May 1, 1900, or by act of Congress, or by act of the local legislature.

"2. The statutory laws of the United States not locally inapplicable.

"3. The military orders and decrees, duly promulgated by the commanding general of the United States in Porto Rico and in force May 1, 1900, except as abrogated or modified by act of the Legislature of Porto Rico.

"The codification is to be made by a commission of three persons appointed by the President—one a native—and they were requested to report fully and finally the result of their labors on or before April 12, 1901.

"The Spanish statutes in force in Porto Rico are the outgrowth of centuries of experience. Indeed, their origin may be assigned to the remote past, when Iberians, Visigoths, and Romans coalesced into what is now the Spanish nation.

"The natives of Spain emigrated to Porto Rico, taking with them their laws, customs, and institutions. Before a settler had landed on the shores of Massachusetts Bay San Juan was a populous town, upon the building and fortification of which a very large sum of money had been already expended. Three armadas heavily armed and equipped, with several thousand men each, had attempted the conquest of the island and failed.

* * * * *
 "While few, if any, of the more enlightened natives, and none of the Spanish commercial class, are inclined to openly comment unfavorably upon the congressional requirement that their laws be codified and changed by a foreign commission, yet almost all in their hearts resent the suggestion that they themselves, unaided by Americans, are not perfectly competent to revise and adapt their own codes if the new conditions require it. They know that they now have an insular assembly to which Congress has delegated the power to legislate. 'What need for a code commission?' They know that Congress has provided a local tribunal before which citizens of the United States and foreigners can have their rights and wrongs adjusted and crimes punished. So Americans have no cause for complaint. 'Porto Rican laws are satisfactory to Porto Ricans,' they say, 'or if they are not, we can change them; but we will always refuse to accept willingly any revision of our codes save our own.'

"But Congress required such revision to be made. While it would seem a physical impossibility for three of the wisest jurists who ever lived to revise and rewrite in a few months a complete code of laws for a foreign people (almost a million in number), yet let it be granted that the report is submitted and receiving congressional consideration. If the revision should cause any material change in the old statutes, protests will go to Congress signed by the thousands, and weighty reasons against the innovation will be presented. On the other hand, there will be no one to support and defend the measure save the code commission and a few Americans resident in the island. Can anyone doubt that Congress in such a case would decline to force upon the people an exotic code that would be hated by the inhabitants?

"The present laws are the result of the process of evolution and are the outgrowth of centuries of experience. Since legislative powers are now vested in the local assembly, one house of which is elected, while at least five-elevenths of the others must be natives, it would seem to be not only expedient, but just and right that the Porto Ricans should be left to work out their legislative destiny.

"The courts of the island are probably the same as are the Spanish courts everywhere, more or less corrupt and inefficient; at least Spaniards themselves have so asserted respecting all these local tribunals. These abuses, however, will disappear if local public opinion demands it, and if that sentiment does not force a reform in procedure, then it will be useless to try to save the malady of the limb by cutting off the member. If public sentiment does not demand a pure and independent judiciary, the island will never have it, for no stream can submerge its own source.

* * * * *
 "The criminal and common law of the Saxon would never fit the Porto Rican. They do not know how to use the privilege they have now of the writ of habeas corpus or the trial by jury, and they do not need them. It is easy, with a pure and independent judiciary, to administer the law and protect all in their civil rights. France, Belgium, Switzerland, and many other countries are well governed under laws similar to those of Spain. The deduction from these reflections is that the laws of Porto Rico will in all human probability continue generally as they now are."

TWENTY YEARS OF PROGRESS.

The annual reports of the attorneys general covering the 20 years since civil government was established in Porto Rico under the American flag show a record of constant progress in all of the services under the department of justice.

In my annual report of 1916, I stated:

"A review of the various reports of the attorneys general of Porto Rico from the inauguration of civil government discloses a record of progress in the establishment and perfection of the judicial system in Porto Rico of which Porto Ricans and Americans may justly feel proud. Porto Rico had at the time of the American occupation a well-developed system of laws and procedure based entirely upon the civil-law system. Since that time there has been a constant substitution of the American system of laws relating to government, and especially was this true in regard to the adoption of the American system of judicial procedure, although the laws relating to personal and property rights have remained largely based on the civil-law system. This development was the more remarkable, inasmuch as it was not forced upon a reluctant people, but was adopted by the elected representatives of the people, under the guidance and with the cooperation of the American officials in Porto Rico. These American officials, however, were as often the recipients of inspiration as they were the creators of inspiration. To the farsighted Porto Rican statesmen who have always stood for the American system of justice the people of Porto Rico and of the United States owe a great debt of gratitude.

"The great organization period of the department of justice was from 1901 to 1905. The first law passed by the first legislative assembly was 'An act to establish trial by jury in Porto Rico' (Jan. 12, 1901).

"The next session of the legislative assembly saw the enactment of four important codes, the Political Code, the Penal Code, the Code of Criminal Procedure, and the Civil Code, all adopted on March 1, 1902. In 1904 we find the adoption of an American Code of Civil Procedure (Mar. 10, 1904), an act reorganizing the judiciary (Mar. 10, 1904), and in the succeeding year an American Code of Evidence (Mar. 9, 1905). All of these codes except the Civil Code were based upon the American system.

"A reading of the history of the great constructive period arouses the enthusiasm of every American and Porto Rican lawyer, and the record of that rapid progress will probably never again be duplicated within such a brief period of time. During the succeeding years much important work has been done, many new laws of importance affecting the judicial system have been enacted, many amendments to the early codes have been adopted, and above all much patient effort has been expended in the improvement of the administration of the system. The years from 1905 to 1913 were years of great material development in Porto Rico. Many great material improvements were made, and new lines of governmental activity were created. The following are examples of the constructive legislation of this period: The laws creating the irrigation service, the bureau of labor, the bureau of weights and measures, the San Juan Harbor board, the civil-service law, the civil-registry law, the sanitation law, the municipal law, the election law, the law of corporations, education laws, the laws providing for licensing of professional men, and many social laws, all of which made the passing legal work and the administrative work of the attorney general and the work of the courts more pressing. The judicial system and the department of justice, so well organized during the early constructive period, proved its great value during the succeeding years of material growth and prosperity."

SPANISH COURTS AND PROCEDURE IN PORTO RICO IMMEDIATELY PRIOR TO AMERICAN OCCUPATION.

It is impossible in this short report to give any adequate description of the courts, laws, and procedure, in Porto Rico under the Spanish régime. The following brief summary is taken from the report of the military governor of Porto Rico for the year ending June 30, 1900:

"The judicial system left in Porto Rico by Spain was grounded on the system then and now implanted in the Peninsula, a system based on the Roman law, and that appears to be well adapted and satisfactory to the Spanish race. Indeed, the system of jurisprudence of Portugal, France, Belgium, Italy, Switzerland, and a part of Austria is similar in its general characteristics to the Spanish.

"The administration of justice in Porto Rico was the subject of a carefully written memoir by the well-known Porto Rican writer and philanthropist, José Julian Acosta. It was published in 1866 in his "Notes" on a new edition of Ifígo Abbad's work. No other publication on this island is so full of historical and statistical information as Acosta's. For the following data respecting the judiciary of the island as it was found

by the Americans the writer is largely indebted to this author, whose writings have been generally used. While his description applies to the conditions respecting the administration of justice as they existed in 1866, yet between that date and 1898 important changes respecting the judiciary were very few.

"The municipal courts were reorganized in 1884, and in 1898 new criminal audiencias were established, while the chambers of war and navy in the tribunals were done away with and special military and naval courts created.

"Stated in a few words, the administration of justice was committed to the following tribunals or officials in the ascending scale:

"1. The *alcalde* and lieutenant *alcaldes* of towns who still retained some trace of judicial functions.

"2. The municipal judges (*corregidores*), one for each township, and depending on the courts above.

"3. The courts of first instance and instruction (the former *alcaldes mayores*), 12 in all, and dependent on the audiencias.

"4. The criminal audiencias, three in number.

"5. The territorial audiencia or court of appeal.

"6. The supreme court of the Kingdom in Madrid, and, finally,

"7. The King himself.

"Besides, there were special tribunals for the army, the corps of engineers, the church, and for administrative litigations.

"THE ALCALDES AND THEIR LIEUTENANTS.

"As the representatives of the supreme government in the municipality, the *alcaldes* possessed large powers. While these officials were supposed to be elected by the voters, in fact they were the nominees of the governor-general. The laws conferred upon them extensive executive powers, and the power to impose fines for various delinquencies, but the provisions containing a specification of these duties, which were closely allied to those performed by judges, are scattered through the statutes, and a detailed mention of them is not attempted.

"THE MUNICIPAL COURTS.

"There was one for each township, the judges being appointed by the president of the audiencia and compensated for their services by fees, paid by those who invoked their intervention or were the subject of their judgments.

"These judges came into existence about 1840, under the name of *corregidores*, and relieved the *teniente de guerra* of some of their judicial functions. Until about 1870 they were designated as above, a word synonymous with *alcalde* or *juez*. These municipal judges had jurisdiction in civil cases when the amount involved was less than 200 pesos, provided these causes were susceptible of being terminated by agreement of the litigants; but in cases not susceptible of such termination, the judge could take jurisdiction, if no more than 20 pesos were involved, in towns where there was a judge of a court of first instance, and in other towns the jurisdiction pertained where the amount reached 30 pesos. They tried complaints of calumny, defamation of character, and minor misdemeanors, where no greater sentence than 10 pesos or 10 days' imprisonment could be imposed, and summarily tried delinquents or persons charged with misdemeanors, the punishment of which would not exceed 30 days' confinement; and they could impose fines in certain cases up to 45 pesos. Appeals were heard by the audiencia of the district and against its decision there was no recourse. They could not take jurisdiction of crimes *per se*. Their powers were limited to the punishment of violations of municipal ordinances. They also had jurisdiction in arbitrations between litigants. The judges of courts of first instance heard and decided appeals against the decisions of municipal judges.

"COURTS OF FIRST INSTANCE AND INSTRUCTION.

"Of these there were 12, two in San Juan, and the others embraced the rest of the island. Each court had a judge and secretary, and all were appointed by the president of the audiencia. It was a *sine qua non* that they be liberally educated, holding college or university degrees. *Jueces letrados* they were designated in Spanish. In rank, precedence, and emolument they were arranged in three categories, according to the importance of the municipality, the chief town of the district, the seat of the judge. They were paid fixed salaries by the State and held life positions, but were removable for cause.

* * * * *

"The chief executive officers of these larger towns were formerly called *alcaldes mayores*. Each of them, of whatever rank, was a judge, and the high-class *mayors* were given a broader jurisdiction, equal to that later conferred on judges of first instance courts.

"These courts, although of different rank, i. e., final, promotion, and entrance, had equal jurisdiction and powers, and the judges took cognizance of all cases, criminal and civil, that arose within their respective districts, except such as were by law reserved; for there were certain persons, like the clergy and nobility, who were under a privileged jurisdiction, but with such persons writs of injunction were issued in cases of forcible entry, and writs of *mandamus* to repossess persons forcibly ejected. These courts heard appeals from the municipal judges, and could fully try and finally dispose of all cases involving persons enjoying privileged jurisdiction if the parties thereto requested trial, but there was appeal to the *audiencia*. In criminal cases the proceedings, if not resulting in acquittal, went no farther than the preparation of a summary of the testimony, and the judge asked of the *audiencia* a sentence appropriate to the crime. Another function of the first instance judges was to discipline the lower or local judges and to punish them by fines and costs for misdemeanors in office; but here, also, there was right of appeal to the *audiencia* above.

"THE CRIMINAL AUDIENCIAS.

"The personnel of each was as follows: One president, two magistrates, one public prosecutor (*fiscal*), one assistant public prosecutor (*abogado fiscal*), one secretary, and the usual court officials.

"There were three in the island—one for each of the three districts into which the island was divided—each having jurisdiction over all felonies committed within their respective districts that were not reserved for special tribunals, as the church, the army, and the navy. These courts took the name of the principal town, as San Juan, Ponce, and Mayaguez, and the courts of first instance within the district were dependencies of the *audiencias*. The persons comprising the criminal court of San Juan and their employees were all a part of the territorial *audiencia*.

"As before stated, the first instance judges sent up the summaries of crimes of which they had taken cognizance. These were, in fact, indictments, accompanied with report of testimony. If these judges believed the accused guiltless, they recommended dismissal of the case, and meanwhile provisionally released the man, but if they believed him to be guilty, it was so stated and the *audiencia* was asked to award a particular sentence appropriate to the crime. In respect of criminal causes these tribunals were courts of instruction, while in respect to civil cases they were courts of first instance. All sentences of death were reviewed by the supreme court in Madrid as appeal cases, for the law presumes an appeal in every case of death sentence.

"TERRITORIAL AUDIENCIA.

"With personnel as follows: A president, a president in chambers (*en sala*), five judges (*magistrados*), one prosecuting attorney (*fiscal*), one assistant prosecuting attorney (*teniente fiscal*), one law reporter (*abogado fiscal*), one secretary, and necessary clerks, bailiffs, etc.

"This tribunal had original jurisdiction in impeachment proceedings of other judges, civil or ecclesiastical, and it had jurisdiction as a court of appeals in the following:

"Of criminal and civil trials in the second instance and in the third in certain cases.

"To grant or deny appeals to the supreme court in Madrid by inferior judges against decisions of superior judges.

"To take cognizance and render decisions in case of appeals from unjust decisions of ecclesiastical courts or prelates.

"To appoint a lawyer to take cognizance of civil or criminal cases where the proper judge had refused to take cognizance.

"To remove the trial of a criminal case from one judge to another when the ends of justice required it and the law sanctioned it, this to be done only by the *audiencia* sitting in banc.

"To decide questions of jurisdiction.

"To render decisions respecting gubernative and police powers.

"To investigate the action of inferior judges and to instruct them in case it be necessary to prevent delay in the administration of justice; also in extraordinary cases of necessity to censure, reprimand, and fine them, and even to prefer charges against them for misdemeanors.

"THE SUPREME COURT OF THE KINGDOM.

"This was purely a court of appeals, and to it was referred a large number of criminal cases and some civil ones. At the time of change of sovereignty a very large number of cases had been appealed to this court and were being considered. So far as has been ascertained the result of the action had by this court before the change of sovereignty has not been made known, nor have the papers been returned.

"THE KING.

"Having the power of legislation with or without the cooperation of the Cortes and having the pardoning power, His Majesty was a very important part of the judicial system.

"While there were various special tribunals, already referred to, such as the military, naval, ecclesiastical, commercial, and administrative courts, detailed statements respecting each are omitted for the reason that they were of subordinate importance.

"The fiscals and secretaries of the courts had functions and duties which in many respects were the same as those of prosecuting attorney and court clerks in the United States, but they had other and quite different functions and attributes. The fiscals, like the judges (*magistrados*), all held life positions, and were promoted according to fixed rules. They had retirement privileges after certain terms of service. The fiscals were promoted to vacancies of judges, and the latter to appropriate vacancies that gave promotions in the office of fiscal."

In the annual report of the attorney general of Porto Rico, dated August 1, 1902, here is the following description of the Spanish Criminal Code and Code of Criminal Procedure:

"The Spanish criminal code, however, established penalties in such minute detail as to require special study on the part of judges in order to enable them to be applied. Aggravating and extenuating circumstances in connection with the commission of the crime or offense were required to be taken into consideration and the penalty adjusted according with mathematical precision. The age, condition in life, or other circumstances personal to the accused could not be considered.

* * * * *

"Crimes like embezzlement, seduction, and rape, under the Spanish code were considered more as crimes against the person injured than as crimes against the public. The prosecution of such offenses was substantially in the control of the persons wronged, and the offenses might be condoned by them and the prosecution terminated without regard to the public welfare and without the consent either of the prosecuting attorney or of the court. The result was that in some cases, happily few in number, of the violation of females accompanied by shocking brutality the parents, presumably or a pecuniary consideration, condoned the offense and pardoned the offender, leaving the public prosecutor and the court powerless to proceed, and the public conscience outraged and justly indignant. The crime of perjury was practically not punishable at all.

* * * * *

"The Spanish penal code and the code of criminal procedure formed a carefully devised system of criminal law and had many commendable features. They constituted, however, a system which on its face was imposed by paramount power, and not such a system as would be enacted by a free people. It was based apparently on the theory that the judges could not be fully trusted without supervision to perform their duties conscientiously; that each judge should serve as a check or guard upon the others; and that the acts of all should be subject to scrutiny by the ministerial official charged with that duty. The form in which the courts were required to express their findings of facts and opinions on questions of law were all carefully prescribed by law, thus withdrawing from the judiciary that freedom of expression in judicial announcements which in other countries has afforded opportunity for professional reputations."

And in the report of the same attorney general, dated April 1, 1901, it is stated:

"An unusual feature of the procedure in criminal cases is that the evidence is not preserved in a bill of exceptions, but is set forth in substance and minutely in the judgment itself. The judgment is therefore a lengthy document, and, though this feature of the procedure here has been much criticized, so long as the evidence is not otherwise preserved the judgment can not well be condensed.

"The judgments, which are called '*sentencias*,' are divided into three parts. The first part, called '*resultando*,' contains a statement of the facts as found by the judges

from the evidence. The second part, called the 'considerando,' consists of the application, in a very logical manner, of such laws as may be involved upon the facts, and finally indicates, argumentatively, what the decision must necessarily be. Then follows the decision or third part, called 'fallo.'

"These 'sentencias,' or final judgments, are prepared with the utmost care, and in language and phraseology are generally models of elegant diction and the faultless use of words."

DETAILS OF THE PRESENT ORGANIZATION OF THE DEPARTMENT OF JUSTICE OF PORTO RICO.

The general outline of the department of justice of Porto Rico was given in the annual report of the attorney general dated August 16, 1912, and in subsequent annual reports. There has been no substantial change in this organization with the exception of the changes which were caused by the passage of the new organic act on March 2, 1917, which reorganization was discussed in my annual reports of 1917 and 1918, and it is deemed unnecessary to repeat the matters discussed in those reports. It is sufficient for the purpose of comparison to state that the judicial system of Porto Rico to-day is very similar to that found in the United States. We have both insular and Federal courts, with jurisdictions similar to the respective jurisdictions of Federal and State courts. Our supreme court, district courts, municipal courts, and justice of the peace courts are similar in their organization and functions to those of similar courts in any of the States. Our political, criminal, and adjective laws are founded upon similar laws in the States. Practically the only laws of civil origin remaining in full force in Porto Rico are the civil code and the mortgage law.

COMPARISON OF CONDITIONS OF PENAL INSTITUTIONS AND COURT BUILDINGS.

During the 20 years of American occupation great improvements have been made in the construction and leasing of district jails, courthouses, and quarters for the registries of property. The building used as a penitentiary is the same that was used prior to the American occupation. In nearly every annual report there has been a recommendation for the construction of a new penitentiary. However, the building has been repaired and extended and put in excellent sanitary condition. Additional buildings have been erected on the roof of the old building, and more space is available by reason of the transfer of women prisoners to the district jail of Arecibo. There are at present fewer prisoners confined in the penitentiary of San Juan than at any time since statistics have been kept. (See Table 35.) This number has been decreasing generally since the early years of American Government. In 1903 the attorney general reported 705 prisoners sentenced to the penitentiary, of whom 200 had been transferred to district jails to avoid congestion. The total number of prisoners sentenced to the penitentiary whose sentences had not expired or who were not at liberty in parole on June 30, 1919, was 354. None of the prisoners sentenced to the penitentiary are now confined in the district jail, except temporarily pending transfer after conviction or pending transfer when working on insular roads. Many of them are employed in work on the insular roads, so that the actual number of prisoners in the penitentiary at any one time is considerably reduced. The result is that the penitentiary is not crowded, and with the excellent condition in which it is kept it is favorably commented upon by all who visit it.

The Government before the earthquake of November, 1918, was well equipped with district jails in excellent condition, with the exception of Aguadilla, where an unsuitable structure was rented. In Mayaguez the Federal building which housed also the district, municipal, and United States courts, provided adequate facilities for the district jail, and the jail was in excellent condition, with capacity for more than 300 inmates. This building was completely destroyed by the earthquake, and inadequate quarters are now rented. At the time of the American occupation there were no insular jails in Ponce and Arecibo. Both of these districts are now provided with large, sanitary, and suitable jails belonging to the government of Porto Rico. Both of them were damaged by the earthquake, but these damages have been repaired and the jails are in excellent condition. In Guayama there was no insular jail at the time of the American occupation, but the insular government owns a building which, although not adequate for the needs at times, is kept in good condition and has served the purpose fairly satisfactorily. In Humacao the jail is in good condition. In San Juan a segregated part of the penitentiary building is used. This space, however, is inadequate, and it would be impossible to properly attend to all of the prisoners if it were not for the fact that many of them are employed in work

in the public roads and are stationed for a large part of the year in prison camps maintained by the department of the interior.

In 1908 the insular government constructed a reform school at Mayaguez, with capacity for 100 boys. In 1917 additional buildings were erected, increasing the capacity somewhat, and the legislature has again authorized additional expansion. However, these buildings are entirely inadequate to meet the increasing needs of the institution. The juvenile court law and the reform school have been potent factors in decreasing the number of criminals in Porto Rico, and the additional expense involved in enlarging this institution will be more than saved in future years in the reduction of the number of prisoners in the penitentiary and jails. The reform school has suffered in its administration by reason of the building operations, the loss of excellent personnel in the war service, and by reason of the great increase in the number of inmates before the proper extensions were made. Moreover, there is an apparent loss in efficiency due to the reduction in the average age of the boys who are placed in its custody. Formerly it was run more as a jail for minor offenders, who were usually sentenced to remain there until they became 21 years of age. The result was that it soon became filled and there were no vacancies, and the district jails had to be used for minors. About the year 1917, when the penal institutions and the reform school were returned to the department of justice, the reform school had a large portion of its 100 inmates, ranging in age from 17 to 21. These boys had been in the institution a long time. Many of them had become expert carpenters, sailors, shoemakers, and musicians. Between March, 1917, and June 30, 1919, more than 60 boys, mostly of the older ages, were granted conditional pardons on the recommendation of the attorney general, and their places were filled with boys ranging from 12 to 16 years of age. During the same time more than 150 new boys of the younger ages were placed in the institution. All of these changes resulted in great increase of work without corresponding increases in appropriations, and the result was an apparent, although not a real, decrease in efficiency. The salary of the director, \$1,100, was inadequate to obtain and keep an efficient director. The legislature has increased this salary to \$1,500 for the next fiscal year, but even this salary is inadequate. It can not be doubted, however, that the reform school is at present serving a far more useful purpose than at any previous time in its history, and with continued support in appropriations it can be made one of the most excellent schools of its kind in the United States.

The district and municipal courts of Ponce are housed in an excellent building belonging to the insular government. The district and municipal courts of Mayaguez were very well situated in the Federal building before the earthquake but are now inadequately housed in rented quarters. The district courts of San Juan and the supreme court of Porto Rico are inadequately housed in a building belonging to the Federal Government, and a new building for courts is badly needed in San Juan. The district and municipal courts of Arecibo are housed in suitable buildings of the insular government. Practically all of the other courts and the registries of property are housed in rented buildings as suitable as can be obtained for the appropriations available. The Pink Palace, in which is situated the office of the attorney general, is very well adapted to the needs of the office, but this building suffered somewhat from the earthquake and is in need of repairs.

WAR ACTIVITIES OF THE DEPARTMENT OF JUSTICE OF PORTO RICO.

This subject was fully dealt with in my last two annual reports, and the matters discussed therein will not be dealt with in this report. All of the work outlined in the last annual report with regard to the suppression of conditions of vice and prostitution in connection with the mobilization of the National Army from Porto Rico, was continued with unabated energy until after the demobilization of the troops in Porto Rico. This matter was the subject of a special printed report to you on February 1, 1919. The principal part of this special report, omitting the exhibits, is hereto attached marked "Exhibit A." Exhibits B, C, and D show the number of persons convicted in this campaign.

The results of the campaign to suppress prostitution were shown in my special report, Exhibit A, and in Exhibit E, attached hereto. The principal purpose of the campaign, to protect the soldiers at Camp Las Casas, was accomplished to such an extent that this camp had the best record in this respect of any military camp in the United States. This record was the more remarkable, considering that the previous ineffective rate on account of venereal disease among the American forces in Porto Rico was greater than in any other part of the American Army, reaching as high as 506 per thousand in the year ending June 30, 1900. (See report of the commanding general of Porto Rico, George W. Davis, to the adjutant general, dated August 5,

1900, and the report of the chief surgeon of the department of Porto Rico, dated July 24, 1900, included in the report of the commanding general.)

There were altogether 983 convictions in Porto Rico during the last fiscal year for violation of the laws against prostitution. The sentences averaged about eight months each. The women convicted were confined in three of the largest district jails, which had been converted into hospitals, and were given thorough medical treatment. Nearly all of them were found to be suffering with syphilis or other venereal diseases. The report of Lieut. Herman Goodman, venereal officer, Camp Las Casas, in regard to the condition, medical treatment, and cure of these women is attached hereto as Exhibit E. I wish to again call attention to the remarkable cooperation and support which was given to this department in this work by Lieut. Goodman, Dr. Alejandro Ruiz Soler, Gen. Edward R. Chrisman, Gen. Orval P. Townshend, and the other persons mentioned in my special report, Exhibit A.

The large number of women prisoners greatly increased the expenses for the maintenance of prisons. This matter was discussed in my special report of February 1, 1919, where it was stated:

"However, in spite of all this aid, it was inevitable that the funds previously appropriated by the legislature would prove inadequate for the food, clothing, and medicines and medical equipment needed in this work, and the governor in his message to the special session of the legislature which met on November 26, 1918, recommended a deficiency bill to provide for the continuance of the work for the remainder of the year. A bill appropriating the sum of \$25,283.20 was unanimously approved by the senate of Porto Rico, but failed of approval in the house of representatives at the special session. This matter will again be presented to the legislature at its regular session, beginning on February 10, 1919. By making transfers from some appropriations to others and by reducing the rations for all prisoners to the very minimum consistent with the maintenance of life, it has been possible to tide over the period until the legislature will be able to make sufficient appropriations to provide for the maintenance of prisoners for the remainder of the year. The amount authorized in the regular budget for rations for prisoners was at the rate of not exceeding 20 cents a day for each healthy prisoner, and 26 cents a day for each prisoner who is sick. As nearly all of the women prisoners were sick, it was desirable to provide the special rations at the rate of 26 cents a day; but immediately after the adjournment of the special session of the legislature without making the additional appropriations, orders were issued by the attorney general to reduce all rations for all prisoners, men and women, to an amount not to exceed 16 cents a day for regular rations. This ration can be increased as soon as the deficiency appropriations are approved."

The deficiency bill above referred to was introduced in the senate at the session of the legislature which convened on February 10, 1919, by the Hon. Leopoldo Feliú. for an amount of approximately \$54,000 and unanimously passed the senate. It was, however, delayed in the house of representatives and finally passed on June 14, 1919, after the amount had been reduced owing to the economies that had been effected during the months while it had been pending in the house. It would have been impossible to have fed any of the prisoners or attended to their medical needs, during the latter part of this period, had not tremendous economies been made in all branches of the department of justice and transfers made from other items of appropriation for the department of justice to the items for the prisons. The scope of these economies and transfers can be seen by a reference to Exhibits F and G. It was necessary to suspend jury trials and change the vacations of courts from the fiscal year 1919-20 to 1918-1919 and to take many other drastic steps in order to provide the economies to attend to these absolute necessities.

The transfers were made upon my request under the authority of the following provision of the general appropriation act approved December 7, 1917 (Laws of 1917, p. 646):

"Whenever in the opinion of the governor the needs of the service require it, he may authorize the transfer of funds appropriated in the budget of any one department of the insular government to other appropriations of the same department and may also authorize the transfer of appropriations from one heading to another: *Provided*, That no new offices shall be created nor shall any changes be made in the salaries or rates of compensation: *And provided further*, That the funds appropriated for personnel or supplies and not used during the fiscal year shall remain in the treasury and shall not be expended except by provision of law."

As soon as the deficiency bill was passed and approved by the governor, the acting attorney general, during my absence in the States, Mr. Salvador Mestre, did everything possible to normalize the situation of the department. Upon his request special terms of the courts were called to try pending cases, the full food rations were restored to the prisons, and many vacant positions were filled. But it was impossible in the

few remaining days of the fiscal year to make up for the time lost while this matter was pending in the house of representatives and therefore the statistics for this year show a larger number of cases pending in the courts on June 30 than during the last few preceding years. This was not due, however, to any want of diligence on the part of the judges or district attorneys, for they cooperated to the greatest possible extent, both in making the economies, and in attempting to keep their work up to date in spite of the lack of adequate funds. The deficiency bill was passed so late in the fiscal year and such drastic economies had been made that practically none of the money so appropriated was used, but remained in the insular treasury at the end of the fiscal year as unexpended appropriations.

PROHIBITION.

In my last annual report (report of the governor, 1918, page 570) the history of the enactment of the prohibition law in Porto Rico is set forth, together with a report of the first four months of the operation of the law. The first full year of the enforcement of the prohibition law shows interesting results. Tables No. 18 and No. 19 show the number and result of prosecutions in the insular courts for violations of the intoxicating liquor law of 1917, passed by the Legislature of Porto Rico. There were 158 convictions, 58 acquittals, and 26 dismissals. This number of prosecutions has been gradually increasing since the prohibition became effective on March 2, 1918, and this work will more and more occupy the attention of this office and of the department. With statistics for only one year and four months of prohibition, it is impossible to arrive at definite conclusions as to the extent that it has resulted in the decrease of crime. Statements are constantly made in some parts of the press and by many private persons that prohibition has been a failure in Porto Rico; that everyone who wants a drink, can get it; that it has only resulted in increasing the price and decreasing the quality; and that there is more drunkenness in Porto Rico now than before prohibition, etc. However, a careful study of the criminal statistics of Porto Rico with those of previous years shows that there has been a steady decrease in crime in Porto Rico since prohibition became effective. The number of trials for homicide have decreased from 66 in 1917, and 46 in 1918 to 41 in 1919. (See Table No. 3.) The total number of jury trials has decreased from 154 in 1917, and 143 in 1918, to 81 in 1919. (See Table No. 4.) The total number of felony cases disposed of by the district courts shows a decrease from 329 for 1917, and 299 for 1918, to 254 for 1919. The number of original trials for misdemeanors in the district courts shows a decrease from 659 for 1917, and 875 for 1918, to 587 for 1919. The total number of criminal cases presented to the district courts for 1917 was 1,838, for 1918, 2,239, and for 1919, 1,831. (See Table No. 8.) In considering the number of trials in the district courts it is necessary to note that the municipal and district courts have concurrent jurisdiction in all cases of misdemeanor, and it is necessary to consider the statistics of the municipal courts in connection with those of the district courts. However, the figures for the municipal courts show a similar decrease in the number of cases presented as well as in the number of convictions. In 1917, 36,336 cases were presented. In 1918, 32,632 cases and in 1919, 30,955 cases. In 1917 there were 26,043 convictions in the municipal court, in 1918, 23,201, and in 1919, 21,379. In the justice of the peace courts the number of convictions decreased from 8,605 in 1917, and 7,416 in 1918, to 6,309 in 1919. (See Table No. 14.) The total number of convictions for carrying prohibited weapons decreased from 1,567 in 1917, and 1,478 in 1918, to 927 in 1919.

In short the number of criminal cases in all courts and in all kinds of crime has decreased steadily since prohibition went into effect. It is impossible to say whether this has been due entirely or in large part to prohibition, or whether it has been caused partly by a more efficient administration of the laws and a discouragement of crime. It has certainly not been caused by a more lax enforcement of the laws, for the statistics of the number of complaints presented to the municipal courts and to the fiscals show a like decrease. There have been not only less convictions, but a correspondingly fewer number of complaints presented.

The intoxicating liquor law passed by the Legislature of Porto Rico contains inadequate provisions for its enforcement. The bill as drafted by this office contained all of the provisions necessary for enforcement. The defects in this law were commented upon in my opinion to the governor dated December 4, 1917. (Vol. 7, Opinions, Attorney General, page 260 at pages 265 and 267.) However, the legislature had adjourned, and it was necessary to approve the law, and await for amendments at another session, or to remain without any enforcement provisions. No such amendments have been made up to the present time. Inasmuch as prohibition is in force in Porto Rico, not only by reason of local legislative enactment, but also under the organic act and under the war prohibition act of Congress, which became effective on

July 1, 1919, the United States court also has jurisdiction to prosecute for the illegal importation, manufacture, sale, or gift of liquors, and the penalties under the war prohibition act are far more effective than those under the local laws.

Many cases that otherwise would have gone to the insular courts have been denounced by the police to the Federal authorities. The question of concurrent jurisdiction has usually been decided by agreements as to policy entered into between the United States attorney, the chief of police, and myself. Naturally the greater number of cases have been tried in the insular courts because they are situated in all parts of the island, and the cases can be tried more economically, both for the government and for the defendants. But with the new war prohibition act, and the constitutional amendment, with the greater penalties provided under Federal laws, more and more cases will be tried in the Federal court.

There were 13 cases commenced in the district court of the United States for Porto Rico, 11 of which resulted in convictions and 2 of which were nolle prossed.

By far the most noteworthy case arising under the prohibition laws arose during my two months absence in the States, and a report of the case prepared by the acting attorney general, who had charge of it appears hereinafter under the title, "The Floralina—Hair Tonic Case."

WORK OF THE COURTS.

As above pointed out under the title of "War activities," the courts and fiscals were greatly handicapped in keeping their work, especially trials in criminal cases, up to date, by the delay in the passage of the deficiency appropriations. However, in spite of this handicap, a comparison of the statistics of this year with those of previous years shows a record of efficiency.

The number of cases pending in the several courts due largely to the foregoing reasons are as follows:

Court.	1918	1919
Supreme Court: Civil and criminal cases.....	123	145
District Court of San Juan, Section 2: Criminal cases.....	379	341
All other district courts: Criminal cases.....	163	260
Municipal Court: Criminal cases.....	73	297
Peace courts.....	138	154

JUVENILE COURTS.

This is the fifth annual report submitted to the governor in regard to the work of the juvenile courts since the establishment of the system by the act of the legislative assembly, approved March 11, 1915, which went into effect on July 1, 1915.

For the present report a complete summary of the work performed in the juvenile courts from July 1, 1918 to June 30, 1919, has been compiled and may be found in Tables 39 to 47, inclusive. On July 1, 1918, there were six cases pending decisions, and including these 281 came before the juvenile courts of Porto Rico during this time, and of these 76 cases remained pending on June 30, 1919, 63 of which were pending in the juvenile court of San Juan. Two hundred and five cases of delinquent and abandoned children were heard and disposed of during the past year. Only two cases were dismissed, due to the fact that the children were more than 16 years of age, and these were referred to the municipal or district courts for proper action. The ages of the children brought before the courts fluctuated between 10 and 15 years.

One hundred and seventy-one children were legitimate, more than three-fourths of the total number of cases, and 74 were illegitimate. In 19 cases the status was not ascertained and in the remaining 17 cases the children were recognized.

Of the total number of cases, more than one-half, or 145 children, never attended school and the remainder who did, only a few attended beyond the fifth grade. In 103 cases the children lived with their mothers alone, in 34 with their fathers, and in 52 cases they were found to be living with both parents. There were 36 homeless children, 43 living with friends and 5 with relatives, 5 with brothers or sisters, and in 3 their homes were unknown.

Of the total number of cases, 217 were brought before the courts on petitions made by the insular police, 14 petitions were made by the probation officers, and in 17 cases the petitions were made by the parents and relatives of the children. In the other 37 the petitions were made by the interested parties. One hundred and twenty-seven children were brought before the court on account of alleged petit larceny, and 31

on account of alleged burglary. There were 38 cases of assault and battery, and the other charges were mostly for breaches of the peace, gambling, infractions of the municipal ordinances, and the other offenses are shown in detail in Table No. 45.

One hundred and thirty-eight children were declared delinquent and 19 were found to be completely abandoned, and in 51 cases the children were found to be not delinquent or the case dismissed for want of evidence. In 54 cases the courts sent the children to the reform school, and 10 abandoned children were ordered placed in the charity school. In the remaining cases the children were given to the father, mother, or some relative or friend with the proper instructions for their care.

The lack of adequate facilities to take care of the juvenile delinquents continues to be the most serious drawback to the effectiveness of the juvenile-court law. During the last session of the legislature a bill was introduced in the lower house, providing for the construction of another reform school in the city of Ponce and passed, but the senate did not take it into consideration. The reform school at Mayaguez is now more than ever insufficient and inadequate to take care of the juvenile delinquents which are sent there every year.

Another bill presented in the house of representatives during the last session was one creating a special juvenile court with exclusive jurisdiction over the island. This bill was also passed by the lower house, but it was not discussed or passed by the senate. The principal feature of this bill was the placing in the hands of one judge the work of all the juvenile cases presented throughout the island and doing away with the present system under which each district judge must act also as judge of the juvenile court of said district. The general provisions of the present juvenile court law were embodied in the new bill.

For more detailed information in regard to the juvenile courts see Tables 39 to 47.

IMPORTANT LITIGATION.

PEOPLE OF PORTO RICO *v.* AMERICAN RAILROAD CO. OF PORTO RICO.

The report of last year deals with this case up to the time of its appeal to the circuit court of appeals, detailing the facts and questions of law raised in the lower court (p. 581).

On January 10, 1917, the American Railroad Co., operating the most important and extensive railways on the island, petitioned the executive council for permission to raise tariff rates on sugar and its products 20 per cent. After the approval of the Jones Act in March, 1917, the company withdrew its application. There is a provision in the Jones Act that the interstate-commerce act shall not apply to Porto Rico. The plaintiffs contended that this act had been in force in the island prior to the new organic legislation, and that the executive council never had jurisdiction over freight rates. Naturally, had the contention been sustained, the country for a time would have been left without machinery to regulate the business of common carriers.

The company failing to comply with an order of the executive council prohibiting the enforcement of rates which had been arbitrarily advanced without authority, suit for injunction was commenced by the attorney general in the insular courts and removed (by petition of the company) to the Federal court. In August, 1917, that court handed down a decision holding that prior to the enactment of the Jones Act the matter of rate regulation of common carriers in Porto Rico was exclusively within the jurisdiction of the Interstate Commerce Commission and that the authority attempted to be delegated by the legislature to the executive council in 1908 was void as conflicting with Federal law.

Upon appeal taken by the attorney general, the Circuit Court of Appeals, speaking through Mr. Justice Aldrich, pointed out that while the safety appliance act applied to Porto Rico, without being made expressly applicable, this was so because the rights involved therein were incident to the rights involved in the Federal employees' liability act—made applicable by apt words. On the other hand, it was held that the interstate commerce acts were never applicable in Porto Rico. The remoteness of Porto Rico, geographically, was repeatedly emphasized, and therefore the unlikelihood that Congress would include the railways of the island in a scheme of control by a continental commission.

While the case was on appeal, the public service commission, having been granted authority by the Jones Act and local legislation, on June 11, 1918, ordered the company to desist from charging increased rates and the company appealed from the order to the district court of San Juan. On October 14, 1918, the company filed with the commission an application for a 20 per cent increase in its freight tariff rates. After several sessions and public hearings the increase was allowed for two years as from February 21, 1919.

After the decision of the circuit court of appeals and the denial of a petition of certiorari made to the Supreme Court of the United States, the company withdrew its appeal to the district court of San Juan from the order of the commission and made arrangements for reimbursement of the overcharges collected. The total yearly freight revenue of the company is approximately \$1,200,000, of which amount 80 per cent represents income from the transportation of sugar cane and its products. The net result of winning this case, therefore, in dollars and cents, was about \$400,000 saved to the shippers of Porto Rico. The company did not actually have to disburse that amount, inasmuch as some of the large shippers had never paid the increased rates, but had the decision been the other way, that sum represents approximately the additional freight charges that would have had to be paid.

COMPANIA DE LOS FERROCARRILES DE PUERTO RICO v. THE TREASURER OF PORTO RICO.

At the close of last fiscal year this case had been submitted for decision of the United States District Court of Porto Rico. It involves the construction and legal effect of the provision in petitioner's franchise which reads:

"Sec. V. The said grantee shall be exempt from all insular and municipal or local taxation of every name and nature for a period of twenty-five years from the date of the acceptance by it of this grant; provided, however, that said exemption shall not become effective or operative until the Legislative Assembly of Porto Rico shall by law duly authorize such exemption."

The government, through respondent, treasurer of Porto Rico, attempted to collect taxes from the American Railroad Co., lessee or operator of petitioner's railway lines. Petitioner thereupon enjoined the said collection, alleging that the property upon which the tax was assessed against the American Railroad Co., and upon which it was feared a levy would be made, was that of petitioner and by its franchise exempt. The principal assessment involved was upon the rolling stock of the American Railroad Co., which had been purchased by the American Railroad Co. The district court on December 20, 1918, rendered an opinion the dispositive part of which reads:

"It follows, therefore, that in levying upon real property and rolling stock and all other property used and necessary for the operation of the railroad, the treasurer is levying upon what does not belong to the taxpayer, the American Railroad Co. of Porto Rico, and what does belong to the plaintiff herein, the Compañia de los Ferrocarriles de Puerto Rico, exempt from taxation, and the injunction will be continued as to such property."

"Cash," or moneys on hand, the court held, had not been proved to be property of the petitioner and therefore was excluded from the decree.

An appeal has been taken by The People of Porto Rico and the case is now pending in the Circuit Court of Appeals at Boston.

MUNICIPALITY QUEBRADILLAS v. THE EXECUTIVE SECRETARY OF PORTO RICO.

The facts in this case are fully stated in my last annual report (p. 575).

The legislature sent to the governor on November 25, 1917, several bills, among which was an act for maintaining at insular expense the artesian well in Quebradillas. On the following day the legislature adjourned until February 4, 1918. Upon reassembling, a final adjournment was taken on February 6, 1918. The bills so presented to the governor were neither signed nor returned and the claim was made that they became laws.

The Supreme Court of Porto Rico ordered the publication of the bill in question and held that these bills became laws without the governor's action on the ground that the 10 days allowed for the governor for consideration of bills were calendar and not legislative days, and that during the first 10 days of the 72-day recess of the legislature the governor could have returned the bill to the house of its origin. In other words, it was held that the adjournment of 72 days was not such an adjournment as was contemplated in the following provision of the organic act:

"If any bill shall not be returned by the governor within ten days (Sundays excepted) after it shall have been presented to him, it shall be a law in like manner as if he had signed it, unless the legislature by adjournment prevents its return, in which, it shall be a law if signed by the governor within thirty days after receipt by him otherwise it shall not be a law."

There is no case in the Supreme Court of the United States where a similar question has been squarely decided, and there are conflicting decisions in the State courts. However, it is believed that this question will certainly be raised in other cases arising in Porto Rico and carried to the Supreme Court of the United States in some appealable case, inasmuch as there are eleven laws, one involving labor contracts, which have been published under the ruling of the Supreme Court of Porto Rico.

WEST INDIA AND PANAMA TELEGRAPH CO. (LTD.) AND COMPAGNIE FRANCAISE DES CABLES TELEGRAPHIQUES
V. THE PUBLIC SERVICE COMMISSION, AND THE ATTORNEY GENERAL OF PORTO RICO.

The facts of this case were fully stated in my last report: (p. 579), from which the following extract is taken:

"On March 26, 1918, the public service commission after due hearing, ordered the West India and Panama Telegraph Co. and the Compagnie Francaise des Cables Télégraphiques, the two cable companies which control the entire service between Porto Rico and outside points, to reduce their rates by 40 per cent after April 9, 1918, on all commercial messages and press dispatches between the United States and Porto Rico and specified that the reduction should remain in force for a period of six months unless previously changed before the expiration of that time by the public service commission."

The cable companies brought injunctive proceedings against the enforcement of this order. The injunction was granted and the case appealed. The points raised and decided appear from the following excerpts from the decision of the United States Circuit Court of Appeals dated March 19, 1919:

"The point is taken that the United States District Court of Porto Rico was without power to deal with the injunction question involved by reason of section 286 of the Judicial Code, to which reference has been made, where it is provided that no interlocutory injunction restraining the action of officers acting under statutes of States shall be granted upon unconstitutional grounds by a single justice or judge, nor until the application shall be heard and determined by three judges, or a majority of them. So we have to consider whether equity procedure in the Island of Porto Rico is subject to the provisions of this section, and we think it is not.

"The conclusion is that, while Congress, under its plenary power had the unquestionable right to do so, that it never has delegated to the legislative assembly of Porto Rico authority to regulate interpossessional, interterritorial, interstate or foreign cable rates, and that the local legislative body, therefore, was without authority to create a commission for that purpose, and that, while the Interstate Commerce Commission may not exercise jurisdiction in respect to Porto Rican intraisland rates, that it has jurisdiction over her interpossessional and foreign instruments of commerce. We think, therefore, that the district court of the island was right in holding that the assembly was without authority over the subject matter of cable rates.

"The acts and threatened acts of interference with the plaintiff's rights and business were, and are, as we have held, without warrant, and on that ground, as well as to avoid a multiplicity of suits, there is plainly jurisdiction in equity."

PORTO RICAN AMERICAN TOBACCO CO. V. JOSE E. BENEDICTO, TREASURER OF PORTO RICO.

The facts in this case were fully reported in last year's annual report (p. 580).

At that time this case had been submitted for the decision of the United States district court. The subject of the controversy was the act of the legislature approved December 3, 1917, entitled "An act to amend an act entitled 'An act to protect Porto Rican cigars from fraudulent misrepresentation by providing for adequate expert inspection, and the issue of stamps of guaranty covering the origin of tobacco used in the manufacture of such cigars, intended for exportation, and for other purposes,' approved March 11, 1915."

The original law, while exacting government inspection of cigars and tobacco products, and requiring the affixing of stamps on packages prior to their exportation, made no charge for the stamps. The amendment imposed stamp fees the collection of which was enjoined because, it was alleged, under the guise of an inspection law, the government was collecting revenue; and, secondly, the revenue feature was not expressed in the title of the act. After discussing the questions of law involved, the United States Circuit Court of Appeals, affirming the decree of the lower court, held:

"The result is we must hold that the amendment of December 3, 1917, made the old inspection law into an inspection law and a revenue law; that the bill thus contained 'more than one subject'; that the new subject of revenue provision was not 'clearly expressed in the title,' and that the act is void as to the revenue features not so expressed, because *ultra vires* the Porto Rican legislative powers.

IRRIGATION APPEALS.

There were 25 irrigation appeal cases pending decision in the District Court of San Juan, section first, at the end of the last fiscal year, as stated on page 573 of the annual report of the attorney general for 1918.

On January 2, 1919, the court rendered judgment in these cases, in 23 cases in favor of the contentions sustained by the government with regard to the inclusion of

certain lands within the permanent irrigation district by the irrigation commission, and in regard to valuations which had been given to the relinquished water rights and concessions. Only two cases were decided against the government. These were the cases of *The People of Porto Rico v. C. & J. Fantauzzi et al.*, and *The People of Porto Rico v. H. Hartman et al.*, and this department has appealed to the Supreme Court of Porto Rico in both cases. Of the 23 others, only three cases have been appealed to the Supreme Court of Porto Rico by the interested parties, two cases of *The People of Porto Rico v. C. & J. Fantauzzi* and the case of *Fernando A. Vendrell v. The Irrigation Commission et al.* These cases are now pending before the Supreme Court of Porto Rico.

TAXATION CASES.

Fifty cases instituted to recover taxes paid under protest required attention during the fiscal year 1918-19. Forty of these cases were originally filed in the District Court of San Juan, section first, four in the District Court of Ponce, four in the District Court of Humacao, and two in the District Court of Guayama. Taxes claimed in these cases amount approximately to \$177,300.

The case of *Ensenada Estates v. The Treasurer of Porto Rico*, referred to in page 579 of the report of the attorney general for 1918, which was pending decision in the Supreme Court of Porto Rico on appeal taken by the plaintiffs from the order of the District Court of San Juan granting the motion to dismiss on the ground of nonprosecution, was decided by the supreme court on December 23, 1918, reversing the judgment of dismissal of the lower court on the ground that the plaintiffs had shown sufficient reasons for not having prosecuted their case more diligently. The case is at present pending trial on the merits in the district court.

The four cases of *Charles L. Crehore v. The Treasurer of Porto Rico* were suits brought under the act of March 9, 1911, to recover taxes paid under protest during the semesters of 1917-18 and 1918-19. The ground of recovery was alleged unfairness and illegality in the assessment made by the treasurer and sustained by the board of review and equalization in determining the value of the plaintiff's lands, the taxes on which were paid under protest by the plaintiffs. Demurrers were presented in each case which were sustained by the district court, but on appeal the supreme court reversed these judgments and the cases were sent back to the district court to await trial on the merits.

For the purpose of simplifying the production of evidence in the trial of these cases three expert witnesses were appointed, one by the treasurer, one by the plaintiffs, and the third by mutual agreement. These witnesses examined and studied the books, papers, and documents, and the property of the plaintiffs and rendered a unanimous report as to the assessments, in some cases recommending that the court sustain the previous assessment of the treasury department and in others stating that the assessments should be reduced to the amount which they specified in their report.

This report of the witnesses was submitted to the court at the trial of these cases, which occurred during my absence in the States, and the court entered judgment in accordance with it, sustaining some of the assessments and reducing others, and in these last cases ordering the treasurer to return the difference in the taxes which were paid under protest.

Although the court rendered judgment in these cases in accord with the report of the expert witnesses named, this report did not contain the facts on which said witnesses based their opinions although it was understood by me that this should be done, and at present the parties to these actions have signed and presented to the court a stipulation by the terms of which those facts are now to be submitted, so that the court may pass on the cases again and confirm or modify its previous judgment.

The three cases of *C. & J. Fantauzzi v. The Treasurer of Porto Rico*, and the two cases of *H. & S. Bohn v. The Treasurer of Porto Rico* were also cases for the recovery of taxes paid under protest for alleged excessive assessments made by the treasurer and sustained by the board of review and equalization of the properties of the plaintiffs. These cases were also submitted to the court on the report of the three expert witnesses named by the parties, who examined the properties and determined the value of the same and sustained in their majority the assessments made by the treasurer, but declared that certain assessments should be reduced. The court entered judgment in accord with the report of the witnesses and ordered the treasurer to reduce certain assessments of the plaintiffs' property and to return part of the taxes paid under protest. It is intended to follow the same procedure with regard to submitting the facts to the court upon which the opinions were based and asking for a reconsideration of the decisions as in the Crehore cases, or in case a stipulation can not be agreed upon by the parties a motion will be made by the government for this purpose.

In the District Court of Humacao four tax cases were decided in favor of the government on March 21, 1919. These were the following: Diego Salduondo Veva v. Treasurer of Porto Rico; Pilar Bocerril v. Treasurer; Fajardo Sugar Co. v. Treasurer; and James Bliss Coombs et al. v. The Treasurer. The court sustained the assessments made by the treasurer on the properties of the plaintiffs on the ground that they were equitable and correct and in the case of the Fajardo Sugar Co. also dismissed the action due to the fact that the plaintiff had not appealed to the board of review and qualification before bringing the action to recover the taxes paid under protest.

PHARMACY CASE.

As a result of the illegal proceedings of the board of pharmacy, three of whose members were prosecuted and convicted four years ago, as referred in the annual report for 1915, page 398 of the report of the attorney general, quite a number of persons obtained licenses as pharmacists without having complied with the requirements of the law of pharmacy as to their previous studies. The department of justice instituted proceedings on December 12, 1917, in the District Court of San Juan, Section First, against Celestine López Pérez to obtain the cancellation of his license as pharmacist and requesting that he be enjoined from continuing in the practice as a pharmacist on the island of Porto Rico, due to the fact that he had not complied with section 7 of the pharmacy law as to the requirements for the enrollment of students, who must present a diploma or document showing that they have successfully passed an examination embracing all the scientific and literary subjects of the course at some high school or the island or at some reputable similar or analogous institution of the United States or elsewhere if satisfactory to the board.

The defendant presented a demurrer, which was overruled. On May 22, 1918, the case was argued on the merits and on November 29, 1918, judgment was entered for the government, the court ordering the cancellation of the defendant's license and enjoining him from practicing as pharmacist under said license in Porto Rico.

On December 30, 1918, the defendant appealed to the Supreme Court of Porto Rico and at the same time presented a motion for rehearing, which was argued and denied on January 21, 1919. The case is now pending on appeal in the Supreme Court of Porto Rico. The case is important inasmuch as there are a great number of pharmacists whose licenses were illegally obtained without complying with the requirements of the statute, and the decision of the supreme court will determine whether other actions shall be brought against them.

During the last session of the legislature a bill was passed by both houses reorganizing the board of pharmacy and at the same time declaring valid all licenses granted by previous boards if the pharmacists had passed the examinations required by the statute, even if they had not complied with the requirements of law as to their previous studies or preparation. However this law was vetoed by the Governor of Porto Rico and the legislature did not reconsider the bill.

WORKMEN'S COMPENSATION ACT.

NEW YORK & PORTO RICAN STEAMSHIP CO. v. WORKMEN'S RELIEF COMMISSION.

This was an action for an injunction presented by the New York & Porto Rican Steamship Co. v. The Workmen's Relief Commission in the District Court of the United States for Porto Rico. Plaintiff obtained a writ of injunction against defendant, alleging that the compensation act was elective and that it had exercised its option to renounce the benefits of the law. By inadvertence or clerical error, section 28 of the statute contained a phrase which lent a certain amount of plausibility to the contention:

"That all employers accepting the benefits of this act and employing laborers under the conditions specified in this act shall contribute to the workmen's relief trust fund in the form and manner provided herein."

The decree of the district court granting the injunction was appealed to the circuit court of appeals, which reversed the decree and declared the law compulsory. The appellate tribunal held squarely with the department that the general intent of the compensation act was to limit the recovery of the laborer or employee to administrative remedies and that a holding that the act was not compulsory as to employers would result in the satisfaction of claims for injuries from the pocket of the taxpayer, since to restrict the remedy of the employee meant that he had to be paid by the government, which in turn could not reimburse itself for the outlay. As the court says:

"The plaintiff really, therefore, seeks to escape entirely liability for industrial accidents. It would unload its entire burden both under the new and under the old law upon treasury of Porto Rico."

Of no less importance is the holding that plaintiff had an adequate remedy at law. The local law provides for a payment of taxes under protest and the right of appeal to the local courts against the decision of the assessor or collector. It is hoped and expected that this decision will mitigate in part, at least, the difficulties which have heretofore beset the treasury in the collection of taxes, and that it may exert a wholesome restraint upon the issuance of injunctions which seriously interfere with smooth fiscal administration and do not appreciably benefit the petitioners in many cases. At any rate the advantages accruing to the litigant (who can protect his interests by payment of the disputed amount under protest) are not commensurate with the prejudice suffered by the government. It is fortunate that the decision, which might have been rested solely upon the issue of compulsion, embraced this aspect of the case.

AMERICAN RAILROAD CO OF PORTO RICO *v.* WORKMEN'S RELIEF COMMISSION.

Plaintiff, a foreign corporation, filed a bill of injunction on February 15, 1919, to restrain the enforcement of the workmen's compensation act, alleging that it had not elected to accept the benefits of the law and therefore was under no obligation to submit reports of accidents, pay premiums, or otherwise comply with the statute. There was also an allegation that plaintiff operates a railroad, is a common carrier, and therefore its liabilities in respect to industrial accidents are governed solely by the Federal employers' liability acts. A restraining order was issued February 28, 1919. A motion to dismiss was then filed. The matter by agreement was left open until the court of appeals should hand down its decision in the case of *New York & Porto Rico Steamship Co. v. Workmen's Relief Commission*, *supra*.

The principles involved are the same as in *Porto Rico Railway, Light and Power Co. v. Workmen's Relief Commission*, which follows:

PORTO RICO RAILWAY, LIGHT AND POWER CO. *v.* WORKMEN'S RELIEF COMMISSION.

A restraining order was issued by the United States District Court for Porto Rico against the defendant upon prayer of the plaintiff, a domestic corporation and common carrier, which alleged that it had elected not to accept the benefits of the workmen's compensation act and therefore refused to furnish to the commission reports of the amount of wages distributed among different groups of its laborers, or to pay the yearly premiums fixed by the commission. The treasurer was enjoined from attaching property to satisfy the payment of the said premiums and the attorney general was made a party for threatening to collect fines for failure of plaintiff to file the reports required. The bill further alleges that plaintiff is without adequate remedy at law and that its responsibility in cases of industrial accidents is governed exclusively by the Federal employers' liability acts.

On April 8, 1919, defendants appeared specially and moved to dismiss the petition on the grounds of existence of adequate legal remedy afforded by the local law providing for appeals from decisions in tax cases; repeal of the Federal employers' liability acts by the Jones law (so far as they affect Porto Rico), and alleging that even if said acts are in force, plaintiff is not relieved of the duty of filing reports and to comply otherwise with the law.

On April 14, 1919, by agreement of the parties, the matter was held in abeyance until decision should be rendered in the case of *New York & Porto Rico Steamship Co.* against these same defendants. After this decision was handed down the plaintiff asked permission to file an amended bill. Of course the question of whether the act is compulsory has been settled by the *New York & Porto Rico Steamship* decision. But there still remains the question as to the validity of the local act in so far as it affects common carriers, and also the issue of adequate remedy at law may be presented in a different way.

Unless the local workmen's compensation act applies to common carriers it will serve but little purpose. The express repeal of the safety appliance acts and the insertion of a new clause in the organic act providing that there shall be no limit to the power of the legislature to enact laws for the "health and safety" of employees, I construe to mean that Congress has relinquished its power in accident cases, thus allowing the local authorities to substitute compensation for the older and clumsier method of recovery by litigation.

TUBERCULOSIS HOSPITAL CASE—H. H. SCOVILLE ET AL. *v.* ALEJANDRO RUIZ SOLER ET AL.

This, also, is one of last year's cases. It was at the date of my last report pending appeal in the Circuit Court of Appeals from a decree of preliminary injunction granted by the United States District Court of Porto Rico. The suit was an effort to prevent

the construction and establishment of a tuberculosis hospital on the site chosen for it by the commissioner of health on the ground that a nuisance would thereby be created; that the water supply would become contaminated, and the health, happiness, and comfort of the surrounding community would be endangered; and that the value of the canning factory of the plaintiff, situated in the immediate neighborhood, would be materially diminished. While the appeal from the preliminary injunction was pending the case was tried on the merits in the lower court and a final injunction rendered. The important question from the department's point of view was whether the discretion of the commissioner of health, acting in good faith, could be interfered with. If it could, then the case was itself the best exemplification of the difficulty, if not the impossibility of efficient sanitary administration, inasmuch as the court was asked to substitute its opinion for that of the health authorities. After final decree had been given by the lower court sustaining the prayer of the petition the decision of the circuit court of appeals was handed down on the appeal from the preliminary injunction. The circuit court of appeals in its opinion stated:

"From the foregoing provisions of law it appears that Soler, as commissioner of health, was authorized, and that it was his duty, to determine upon a suitable site or the location of a tuberculosis hospital and to purchase the same for the people of Porto Rico, and it is evident that the performance of this duty involved the exercise of administrative or official discretion.

"It is not alleged in the bill that the defendant, in deciding upon the location, acted in bad faith and beyond the scope of the authority conferred upon him, and, in the absence of such an allegation, it is to be presumed that he acted in good faith and within the scope of his authority. In view of this situation, and the fact that the bill was prosecuted against Soler in his official capacity as commissioner of health, the question arises whether the action is not one in reality against the sovereign—the people of Porto Rico. As to this we entertain no doubt. The action is brought to enjoin the consummation of a contract in which the defendant individually has no interest, and in which the people of Porto Rico are alone interested. It is, in reality, an action against the sovereign, and if it has not consented to be sued, the action can not be maintained."

RUSSEL & CO. *v.* HENNA ET AL.

My annual report of last year and year before last dealt with this case in detail. It centers upon the construction of a clause in a water-rights franchise and was decided by the District Court for Porto Rico against the government, on July 16, 1918.

The record is voluminous, and considerable time was consumed in making up the appeal papers. However, the appeal to the circuit court in Boston was perfected in January of this year and the papers sent. As soon as a printed copy of the record is received the brief will be prepared and the case submitted.

THE FLORALINA HAIR-TONIC CASE.

On June 6, 1919, during the absence in the States of the attorney general, the acting attorney general was called upon to investigate the case of a large enterprise for the manufacture and sale of a hair tonic called "Floralina." Before the case had been called to the attention of this office the police, acting under instructions from the United States attorney, had secured a large amount of evidence showing that this tonic was being sold in many parts of the island in large quantities as an intoxicating beverage. This so-called hair tonic had been manufactured by the firm of L. Villamil & Co., of San Juan. A formula had been filed with the insular authorities stating the ingredients that were to be used in the preparation of the product.

Analyses made by insular, Federal, and private chemists employed for the purpose showed that the article being sold did not contain the ingredients in the proportions stated in the formula. Informations have been filed against a large number of persons engaged in the sale of this product, and a large quantity is now held as evidence under the orders of the judicial authorities. In the meantime the license has been canceled, and the product is no longer being manufactured or sold. It is impossible to give all of the facts of the case in this annual report, inasmuch as the cases for the illegal sale of the product are now pending in the courts.

OPINIONS, RECOMMENDATIONS OF PARDONS AND PAROLES, AND ADMINISTRATIVE WORK OF THE OFFICE OF THE ATTORNEY GENERAL.

Under the provisions of the organic act and of the Political Code and other laws of Porto Rico, the attorney general is charged with many duties, and the matters previously set forth in this report show the scope of these duties. Section 14 of the organic act provides as follows:

"Sec. 14. That the attorney general shall have charge of the administration of justice in Porto Rico; he shall be the legal advisor of the governor and the heads of departments and shall be responsible for the proper representation of The People of Porto Rico or its duly constituted officers in all actions and proceedings, civil or criminal, in the Supreme Court of Porto Rico in which The People of Porto Rico shall be interested or a party, and he may, if directed by the governor, or, if in his judgment, the public interest requires it, represent The People of Porto Rico or its duly constituted officers in any other court or before any other officer or board in any action or proceeding, civil or criminal, in which The People of Porto Rico may be a party or be interested. He shall also perform such other duties not inconsistent herewith as may be prescribed by law."

Under the organic act, the attorney general is also a member of the public-service commission and under local acts a member of the supply committee and of the executive council.

In addition to the work of the attorney general previously outlined, 102 general opinions were rendered to various officers of the government, 72 opinions were rendered in regard to titles of property for school purposes and for the irrigation service, and 42 opinions were rendered in regard to contracts and bonds.

The attorney general made recommendations upon 647 applications for executive clemency compared with 279 for the preceding year; 24 full pardons, 124 conditional pardons, 67 paroles, and 46 commutations, remittances, or restorations of civil rights were recommended.

Four thousand two hundred and two vouchers and five hundred and sixty salary pay rolls were examined and approved and sent to the auditor's office from the office of the attorney general during the year. One thousand five hundred and ninety requisitions for supplies and printing were sent to the bureau of supplies, printing, and transportation from July 1, 1918, to June 30, 1919.

There were 102 new permanent appointments among the officers and employees of the department, 214 resignations, 5 removals, 136 temporary appointments, 40 transfers, 20 reinstatements, 25 promotions, 6 positions abolished, 5 deaths, and 8 reductions. The more important changes in the personnel are listed in Table No. 48.

In closing this my last annual report as attorney general of Porto Rico, I wish to express my deep appreciation of the splendid services and loyal devotion to duty shown by the many officers and employees of this department during the five years that I have had the honor to be its head and to express the same appreciation of the fine spirit of cooperation and friendship which all of the other heads of departments and other officers of the insular government have shown in their dealings with me, and I wish to add a personal note of gratitude to you for your unceasing support and personal confidence in me.

Respectfully submitted.

HOWARD L. KERN, *Attorney General.*

EXHIBIT A.

SPECIAL REPORT OF THE ATTORNEY GENERAL OF PORTO RICO TO THE GOVERNOR OF PORTO RICO CONCERNING THE SUPPRESSION OF VICE AND PROSTITUTION IN CONNECTION WITH THE MOBILIZATION OF THE NATIONAL ARMY AT CAMP LAS CASAS.

OFFICE OF THE ATTORNEY GENERAL,

San Juan, P. R., February 1, 1919.

HONORABLE GOVERNOR OF PORTO RICO,

San Juan, P. R.

SIR: I have the honor to submit a special report of the department of justice with relation to the suppression of conditions of vice and prostitution in connection with the mobilization of the National Army from Porto Rico and the results thereof.

In my annual report of August 20, 1918, under the title "War activities of the department of justice," I had the honor to outline this work up to that time. I stated therein that this work was initiated in February, 1918, and that the many hundreds of convictions obtained and the care and treatment accorded to the women confined will have a continued and profound effect for many years to come. At the time of submitting that report it was impossible to summarize the results thereof in detail. Now, however, I deem it advisable to give you in full the activities of the department of justice from January 1, 1918, to December 31, 1918, in this regard.

THE OCCASION FOR THE ACTION.

The mobilization of the National Army occasioned a vigorous campaign by the War Department for combating the great social evil of venereal disease. According to the annual report of the Secretary of War to the President of the United States, 1917-18 (pp. 18 and 19), "the program of attack has included the repression of prostitution and the liquor traffic in zones near cantonments, provisions for proper social surroundings and recreation, education of soldiers and civilians in regard to venereal diseases, prophylactic measures against them, and prompt medical care. The Commission on Training Camp Activities has been very active in carrying forward this campaign and has received splendid cooperation from local authorities and local and national health officials." The Secretary of War, in a personal letter sent to the governors of the States and Territories, as early as May 26, 1917, had stated:

"Our responsibility in this matter is not open to question. We can not allow these young men, most of whom will have been drafted to service, to be surrounded by a vicious and demoralizing environment, nor can we leave anything undone which will protect them from unhealthy influences and crude forms of temptation. Not only have we an inescapable responsibility in this matter to the families and communities from which these young men are selected, but, from the standpoint of our duty and our determination to create an efficient army, we are bound, as a military necessity, to do everything in our power to promote the health and conserve the vitality of the men in the training camps."

The Secretary of the Navy in a public statement of June 20, 1917, took a stand identical with that of the Secretary of War in the above quotation, and said:

"I am charged with the duty of training these young men for service in the Navy. State and local officers are charged with the duty of seeing that the laws of their States and of the United States are faithfully executed. There lies upon us morally, to a degree far outreaching any technical responsibility, the duty of having nothing undone to protect these young men from that contamination of their bodies which will not only impair their military efficiency but blast their lives for the future and return them to their homes a source of danger to their families and to the community at large."

"These dangers are bad enough in ordinary times. They are multiplied manifold in times of war, when great bodies of men are necessarily gathered together away from the restraints of home and under the stress of emotions whose reactions inevitably tend to dislodge the standards of normal life. The harpies of the underworld flock to make profit out of the opportunities. If we fail in vigilance under these conditions the mothers and fathers of these lads, and the country generally, will rightly hold us responsible."

Surg. Gen. Blue of the United States Public Health Service sent the following telegram:

"Control venereal infections in connection prosecution of the war constitutes most important sanitary problems now confronting public health authorities of the United States. Plan of control mailed you to-day. Request your cooperation forceful enforcement same. Venereal infections should be made reportable and quarantinable means of diagnosis and cure should be provided. Campaign wisely conduct publicity should be launched. Please inform me your action in premises."

"BLUE,
"Surgeon General, United States Public Health Service."

In a letter of the same date the Surgeon General amplifies the telegram as follows: "There is even greater need for the beginning of an active antiveneal campaign in those cities which are outside of the military zones, but into which soldiers go in search of recreation. Most important of all, perhaps, is the thorough education of the general public to the end that this disease group will be considered in the same light as the other communicable infections. This will permit the free and frank discussion of this important question without offense to modesty."

"I shall be pleased to have your views and suggestions as to the prosecution of further work along these lines. Whatever is to be done must be initiated promptly if we are to prevent the next increment of the draft from having the high venereal rate of the last."

"Respectfully,

"RUPERT BLUE."

This attitude was of particular import to the civil government of Porto Rico inasmuch as Porto Rico is a Territory of the United States, under the jurisdiction of the War Department. Certain insular officials, among them the attorney general, are appointed by the President of the United States, and while they are primarily serv-

ing the people of Porto Rico, they are, nevertheless, directly responsible to the Federal Government.

In view of the mobilization in Porto Rico of a drafted army of over 12,000 men, the Commission on Training Camp Activities of the War Department in the month of February commissioned Mr. W. Prentice Sanger, one of the six directors of the commission, to make a personal visit to Porto Rico in order to supervise activities in connection with the camp to be established here. Mr. Sanger was introduced by a general letter from the Secretary of War and a letter was also sent to the attorney general by one of the members of that committee expressly urging the attorney general to assist in the work of caring for the health of the soldiers.

The conditions of vice and prostitution in Porto Rico necessitated immediate action if the mobilization was not to be attended by venereal disaster. Records of the United States Army for Porto Rico show that during the first six months of 1899 the rate of admission per thousand per annum was 467.80. In 1897 the venereal admission rate for the continental army of the United States was 84.59 per thousand. The average rate for the Spanish troops stationed in Porto Rico prior to the entrance of the Americans was, for the five-year period from 1889 to 1893, inclusive, 338.6 per thousand; and from 1894 to 1898, inclusive, 430.8 per thousand; 1898 gave 566 per thousand. These figures are obtained from the Annual Reports of the War Department for the fiscal year ending June 30, 1900, part 13, which is the report of the military governor of Porto Rico, pages 598-599. Compare figures for Camp Las Casas, 1918, page 15, *infra*. That the conditions in regard to public women were very bad immediately prior to the mobilization is shown by the reports of the mayor of San Juan. A special hospital for women was maintained by the municipality of San Juan to register and treat public women. From July, 1912, to July, 1917, 677 women were registered for the first time in that institution. During the fiscal year ending June 30, 1917, 1,540 women were clinically examined to determine whether they should be treated or given a health card. (Reports of mayor of San Juan to governor, 1912-17, inclusive; report of mayor of San Juan to governor, 1916-17, page 100.) In other cities of the island the police registered the women. From the statistics contained in this report in exhibits 15 to 18, inclusive, hereto attached, it is shown that among the prostitutes confined in the jails of the island 95 per cent of them are affected with venereal diseases.

The first report of conditions at Camp Las Casas (Official Bulletin, Aug. 10, 1918) showed the admission of a greater number of persons suffering from venereal diseases in Camp Las Casas for the preceding week than in any other camp or department. The commanding officer of Camp Las Casas, Col. Orval P. Townshend, closed Puerta de Tierra, a barrio of San Juan, to officers and enlisted men. Passes for San Juan and adjacent towns were limited to daylight, except in the case of married men whose families lived in those towns. An inspection of certain towns through the island was made by officers of the camp and, as a result thereof, the town of Manatí was closed to soldiers. Brig. Gen. Chrisman later closed San Juan, Aguadilla, Humacao, and Cayey to soldiers except on official business.

It was evident from a letter of the commanding general to the citizens of Puerta de Tierra that the health of the soldiers was considered of utmost importance (Exhibit 52). The measures already taken seemed not to be sufficiently effective. Only by vigorously enforcing the laws of Porto Rico could the island be rid of avoidable diseases and the health of the men at camp maintained at an efficient level.

LAW ENFORCEMENT.

Prior to July the activities of the department of justice with regard to the suppression of conditions of vice and prostitution were confined to the immediate district surrounding Camp Las Casas. During this period in the district courts of San Juan and in the justice of the peace court of San Juan there were a total of 92 convictions, 34 acquittals, and 10 dismissals. Eighty-three of these convictions were in the justice of the peace court, where the sentences were for the violation of municipal ordinances and were limited to 15 days. In April, 1918, letters were received from Mr. Sanger, secretary of the Commission on Training Camp Activities, and from Maj. Bascom Johnson, Sanitary Corps, National Army, head of the law-enforcement division of the Commission on Training Camps Activities (see Exhibits Nos. 1 and 2), offering full cooperation for the full development of this work.

On July 22, 1918, in view of the situation above outlined, a strong appeal in the form of a circular was sent to all officers of the department of justice, together with annotated copies of the laws of Porto Rico in regard to prostitution, adultery, and intoxicating liquors and also the act of Congress in regard to prostitution near military camps known as the 5-mile zone law. A copy of this circular letter was included in my annual report.

In April of 1918 the office had received the circular of the Attorney General of the United States, dated April 3, 1918, to the officials of the Department of Justice of the United States, instructing United States attorneys to suspend prosecutions pending action by local health authorities, the prosecutions to be resumed after discharge by the local health authorities. Where examinations by local health authorities were not made until after conviction, the Federal courts were requested to delay the imposition of sentences for such time as would be necessary to permit the medical examination. In the circular to the United States attorneys, the United States Attorney General spoke as follows:

"You are therefore instructed in the cases of all persons arrested under the foregoing section and regulations to arrange for the immediate reporting of all such persons to the local or State health authorities, in order that these authorities may have opportunity, under local health laws, to cause medical examinations of such persons to be made and to enforce such health laws, regulations, or ordinances relative to quarantine, treatment, and other disease-control measures. Pending the examination, isolation, and treatment by the health authorities the prosecution should be suspended, to be resumed when the health authorities discharge the defendant from the hospital or other institution to which she may have been sent by them."

In a circular to the district judges, the Attorney General of the United States, after quoting his instructions to the United States attorneys, said:

"You will see that this procedure will, for success, require the cooperation of the courts, so that while any such case is in charge of the health authorities prosecution may be suspended, and where the examination takes place after conviction of the defendant the imposition of sentence may be delayed for such time as is necessary to permit the medical examination." (See report of the Attorney General of the United States, 1918, pp. 667 and 670.)

It was the combined purpose and endeavor of the officials of the department of justice to enforce the criminal laws against prostitution and intoxicating liquors and to protect persons from any action outside of the scope of our laws. This attitude is illustrated by my letter of August 10, 1918, to the district attorney of Mayaguez (Exhibit No. 3), copies of which were sent to many of the district attorneys and judges who requested further information in regard to the work.

The response was enthusiastic and the immediate results obtained exceeded expectations. Every member of the department immediately took up the patriotic cause and cooperated. (Exhibits 4 to 8, inclusive, and 57 to 59, inclusive.)

JUDGMENTS RENDERED FROM JULY 1, 1918, TO JANUARY 1, 1919.

From February 1 to July 1, 92 convictions were obtained in the district courts of San Juan and the justice-of-the-peace court of San Juan. (Exhibit No. 9.) After July 1 the municipal courts throughout the island began to cooperate thoroughly with the police and local authorities. As a result there were 764 convictions, 96 acquittals, and 28 dismissals obtained in these courts up to January 1, 1919. On this date there were 12 cases pending. (Exhibit No. 10 gives in detail the activities of the municipal courts from July 1, 1918, to Jan. 1, 1919.) From these 764 convictions there were 117 appeals taken to the district court, of which 101 convictions were affirmed, 15 were acquitted, and 1 case dismissed. During the period in the district courts there were 58 convictions, 8 acquittals, and 13 dismissals; 4 cases were pending on January 1, 1919. The detailed report of the activities of the district courts for this period is attached as Exhibit 11. From the résumé (Exhibit No. 12) it may be seen that from July 1, 1918, to January 1, 1919, there were 1,102 cases brought before the insular courts, and from this number there were 824 original convictions in the district and municipal courts. The independence and fairness of the municipal courts is manifested by the fact that there were not only convictions but also 96 acquittals and 23 dismissals; and of 117 appeals to the district courts only 15 women were acquitted and one case dismissed, making the total number of different women convicted in this period, whose sentences were not reversed, 809.

In the municipal courts and the district courts the sentences averaged about eight or nine months each and were imposed for periods ranging from three months to one year, according to the seriousness of the offense and the evidence adduced at the trial.

During the same period 15 appeals were heard by the Supreme Court of Porto Rico, resulting in nine affirmances and one reversal and four remained pending on January 1, 1919. Also several petitions for habeas corpus were denied by the district courts and by the supreme court.

CONVICTIONS IN THE FEDERAL COURTS.

This report would not be complete without a statement of the activities of the United States attorney. Prior to July 9, 1918, this official was confronted with many difficulties in the enforcement of section 13 of the selective service act, approved May 19,

1917, known as the 5-mile zone law. By an amendment to the act, and rules and regulations established under it by the War Department on August 3, 1918, this act was made more stringent and prosecutions under it rendered easier, and the zone was increased to 10 miles. As a result of prosecutions instituted, 58 women were sentenced and a number of others were allowed to go on bond conditioned upon leaving San Juan and residing with their families elsewhere on the island outside of the 10-mile zone. Ninety-five women in all were arrested and those not sentenced were practically interned with their families in other towns. (Exhibit No. 13.)

All of the women sentenced to imprisonment by the District Court of the United States for Porto Rico were confined in the insular jails, but they have received the same treatment and care as the women prisoners of the insular government.

MEASURES TAKEN FOR TREATMENT OF WOMEN CONFINED.

A. CREATION OF HOSPITALS.

The conviction and long sentences of over 850 women within a period of a few months gave rise to problems of greater importance respecting the care and treatment of these women. The obtaining of convictions on the part of the officials of the department of justice was but a first step in the real work connected with the suppression of vice and prostitution in Porto Rico. The more important social-welfare work began after conviction and confinement. Unless the proper measures were taken the segregation of these women would not have been successful as far as the general public was concerned. It was realized that the women themselves must be properly treated for diseases and given industrial work. Every resource of the bureau of prisons was applied and cooperation from many private organizations was solicited and accepted.

The district jail of Arecibo was completely reorganized and prepared for the induction of 300 women. The chief of the bureau of prisons was placed in charge of this reorganization work and in a very short time the entire building was repaired, painted throughout, and made sanitary by the installation of modern plumbing. Rooms were equipped for the treatment of the women. The men prisoners were moved to other institutions and to road camps. (See report of independent social worker from Times, San Juan, Aug. 24, 1918, Ex. No. 14.)

By the 15th of August it was necessary to convert the Ponce district jail into a hospital for women. Provision was made for the confinement of 450 women. Supplies were purchased similar to those purchased for Arecibo. Convictions continued, and by the 1st of September the district jail of Mayaguez was prepared for the reception of women.

On October 11, 1918, the island suffered severely from earthquake shocks. The hospital at Mayaguez was rendered unsafe for the confinement of the women. The jailer removed all the inmates, 180 in number, from the jail to the baseball park. As soon as communications were established and conditions ascertained, steps were taken to transfer these women to other institutions. These women were sent to Arecibo and San Juan by private trucks and Army trucks. The measures taken were extraordinary, but the case necessitated quick action.

In the San Juan district jail at this time there were approximately 95 women sentenced by the Federal court or awaiting trial. Proper facilities were provided for the care of about 250 women. The men prisoners in this institution were immediately removed.

B. MEDICAL TREATMENT.

Every measure was taken to provide for the adequate medical treatment of the women confined. The first duty of the department of justice, after making preparations for the housing and care of these women, was to provide for their cure or to aid them in every manner possible to regain their lost health and vitality. In Arecibo the local doctor of the jail was aided by a specialist furnished by the department of health. The physicians were confronted with a hospital full of patients in all stages of venereal diseases and other conditions, including cases of influenza. There were 332 women under treatment in this institution. A complete report of the medical care and treatment in the Arecibo jail is attached hereto and marked "Exhibit No. 15". It will be especially noted that every woman was affected with venereal disease.

In Ponce the work was of the same nature as in Arecibo. The same careful measures were taken and everything was done in order to cure the unfortunate diseased women confined there. Owing to strict quarantine measures therein only two cases of influenza occurred in this institution.

The reports by the doctor of the jail and by Lieut. Goodman, who cooperated materially in the work in that institution, are attached hereto as Exhibits Nos. 16

and 17. It will be noted that 92 per cent of the women in this institution had gonorrhea and 54 per cent had syphilis, 12 per cent of which had active syphilitic lesions which could be diagnosed clinically.

Because of the short time the Mayaguez hospital was in operation, it has been impossible to obtain a separate medical report.

In San Juan during the months that the hospital has been in existence 218 women have been under observation and treatment. The report of the doctor in charge (Ex. No. 18) states that although 15 women had contagious lesions and 62 were four plus Wassermann positive, at the present time there is not one case of infectious syphilis in the institution. There were in this institution 43 cases of influenza. The disease was comparatively light. There were 7 cases of pneumonia and two deaths therefrom, one a woman of 54 years and the other a girl of 18 years. Several of the pregnant women admitted to this institution were pardoned before childbirth, but in the institution itself it was necessary to take care of two cases of miscarriage and one delivery. In the latter case the mother was pardoned and placed in charge of a woman in San Juan.

In all of the hospitals the women were first treated for vermin and itch. Patients were vaccinated and received treatment for hookworm. Special care was taken of the pregnant women. Venereal diseases were intensively treated. In each institution every patient had to report every morning for treatment. The most recent and intensive methods were selected. The statement of the doctor in charge of the jail at Ponce, to the effect that many women were saved from death directly traceable to syphilis; many more were probably prevented from being chronic invalids; and the chances of women giving birth to syphilitic children were greatly diminished is applicable to all the institutions, and in every hospital the patients gained in weight and their general condition was much better than when they were admitted.

C. PARDONS.

It is the policy of the attorney general to recommend the parole of a woman only under certain conditions. The applicant must have observed good conduct while in the hospital, must be free from any venereal or constitutional disease, and must not have any other conviction. She must have some responsible person express willingness to act as friend and advisor and who is willing to see that the monthly reports are made. She must have some useful occupation or means of living without returning to her previous manner of living. When these conditions are met and the case is not one of peculiar circumstances which would make it inadvisable from the point of view of public policy to recommend executive clemency in the form of parole, such paroles are recommended. (Ex. No. 19.)

During the period from August 1, 1918, to January 1, 1919, there were 156 petitions for clemency disposed of on the recommendation of the attorney general. Among these, 26 petitions were recommended favorably by the attorney general and granted by the governor and 113 denied. On January 1, 1919, there were pending 12 applications. (Ex. No. 20.)

PROBLEMS OF ADMINISTRATION.

The increase in the number of women prisoners from 40 for the year 1917-18 to over 800 for the year 1918-19 made great demands for expansion of facilities upon the bureau of prisons. There were no additional appropriations available for this work and the legislature was not in session. It was necessary to exercise the greatest economy and to use the cooperation of every department of the government and of various municipalities and private organizations. Fortunately three of the seven district jails of Porto Rico, with a capacity for 900 to 1,200 inmates, were in excellent condition, and with the cooperation of the department of the interior it was possible to greatly increase the number of men prisoners working on the roads and kept in prison camps and to transfer the remaining men prisoners to the other district jails. The necessary plumbing, painting, and repair of the three district jails that were used for the women prisoners was done by the department of the interior with funds which that department had for the repair and maintenance of public buildings. The next problem was to find women attendants. This problem was solved by filling every vacancy in the position of prison guard as it occurred with a woman guard. Nurses were obtained from the department of health and from the municipalities, especially the municipality of Ponce, which gave splendid cooperation. Also some of the women employed as guards were trained nurses and cooperated in this work. The doctors of the district jails, although busy professional men, who receive from \$41 to \$50 a month salary from the government, gave practically all of their time to this work, and the department of health placed at the disposal of

the department of justice the services of several other physicians as needed, and the military authorities have aided in every possible way, lending the services of doctors and assisting in the medical treatment of the women. This aid was invaluable because of the special qualifications of the Army experts for the treatment of venereal diseases. Splendid cooperation was received also from the several welfare committees which were organized in San Juan, Ponce, and Arecibo, from the Red Cross, the National Defense Society, and the Four-Minute Men. The cooperation of these various officials and organizations will be referred to hereinafter. However, in spite of all of this aid it was inevitable that the funds previously appropriated by the legislature would prove inadequate for the food, clothing, and medicines and medical equipment needed in this work, and the governor in his message to the special session of the legislature which met on November 26, 1918, recommended a deficiency bill to provide for the continuance of the work for the remainder of the year. A bill appropriating the sum of \$25,283.20 was unanimously approved by the senate of Porto Rico, but failed of approval in the house of representatives at the special session. This matter will again be presented to the legislature at its regular session beginning on February 10, 1919. By making transfers from some appropriations to others and by reducing the rations for all prisoners to the very minimum consistent with the maintenance of life it has been possible to tide over the period until the legislature will be able to make sufficient appropriations to provide for the maintenance of prisoners for the remainder of the year. The amount authorized in the regular budget for rations for prisoners was at the rate of not exceeding 20 cents a day for each healthy prisoner, and 26 cents a day for each prisoner who is sick. As nearly all of the women prisoners were sick, it was desirable to provide the special rations at the rate of 26 cents a day. But immediately after the adjournment of the special session of the legislature without making the additional appropriations orders were issued by the attorney general to reduce all rations for all prisoners, men and women, to an amount not to exceed 16 cents a day for regular rations. This ration can be increased as soon as the deficiency appropriations are approved.

Fortunately a large part of the medical work had been done previously and there was a sufficient stock of salvarsan available, together with that which the Red Cross was able to supply, to continue this very necessary treatment, until additional funds are available. The total number of deficiency appropriations necessary to provide for all expenses of the department is about \$45,000. A part of this is due to the extraordinary expenses on account of the earthquakes for rent of jails and courthouse, and for the moving of these institutions and of prisoners to new quarters where the old ones had been destroyed. Another part of the deficiency is due to the epidemic of influenza, which increased the expenses in all of the jails and the reform school for medical attendance and supplies. But the greater part is due to the increased number of prisoners that had to be fed and to the increased clothing and medicine that had to be supplied. During the year 1917-18 there was an average number of 790 prisoners in the district jails (all of whom, with the exception of an average of 25 or 30, were men). This year we will have nearly that average number of women prisoners in addition to the men prisoners. The mere cost of food for 700 prisoners at the rate of 20 cents a day for each prisoner for one year would be \$51,100. Clothing, medicines, and other incidentals for this number of prisoners would have greatly increased this figure. In order to avoid such a large deficiency bill, the greatest economy has been exercised in all matters under the department of justice and in the prisons, and fortunately the number of men prisoners during the fiscal year has been less than during any recent year. The reasons for this decrease in the number of men prisoners belong more properly in my annual report, but it is probable that it will be shown to be due largely to prohibition, the war, the mobilization of so many men in the military camp, and the sending of so many laborers to the United States for several months. At any rate it is fortunate that we will be able to finish the fiscal year with as small an amount of deficiency appropriations as that estimated. Of course this estimate does not take into account any possible emergency which may arise between now and the 30th of June.

EFFECT OF THESE ACTIVITIES ON CAMP LAS CASAS.

By the repressive measures described, it has been possible to avoid infection at Camp Las Casas at a great saving of health and wealth. That the mobilization of 12,000 men would certainly have led to venereal disaster had any *laissez faire* attitude been taken can readily be seen. The figures above quoted show a venereal admission rate of 467.80 per thousand per annum for the first six months of 1899 when the first American army came to the island. Instead of reduplicating the situation of 1899, during the six months in which this camp of over 12,000 men was maintained, only 32 cases of venereal diseases were contracted by men while in Camp Las Casas. (Of-

ficial Bulletins from August 10, 1918, to January 11, 1919, inclusive.) At the time of demobilization there were at Camp Las Casas no ineffectives necessitating extended hospitalization because of venereal disease.

From a report of the Surgeon General of the United States Army on the admission rate of venereal disease for 44 camps and cantonments for the period of six months ending December 27, 1918, Camp Las Casas stands third lowest with the rate of 49.7. (Annual admission rate for special disease reported during the six months ending December 27, 1918.) The average rate per thousand recorded was 189.89. These figures well illustrate the remarkable result of the rigorous enforcement of the laws against prostitution on the health of the camp.

COOPERATION GIVEN.

In speaking of the cooperation received from the sources outside of the department of justice, it is almost impossible to mention all of the aid that has been given. Mention has already been made previously in this report and in my annual report of the great aid that has been given by the department of health. Dr. Alejandro Ruiz Soler took personal charge of the institution at Arecibo and loaned the services of several doctors and nurses, and during the influenza epidemic furnished medicines to the women's hospitals. The quarantine hospital was placed at the disposal of the department of justice.

In my annual report I spoke of the aid rendered by Col. Orval P. Townshend, who was at the time the commanding officer at Camp Las Casas, and the aid of the medical officers, Lieut. Col. Lippitt, and Lieut. Herman Goodman, who have aided in every possible way. Since that report, the army has been called upon to render extraordinary aid. Brig. Gen. Chrisman has loaned and given to the department of justice supplies to be used in the hospitals at the time of the earthquakes and influenza epidemic. Lieut. Goodman took active charge of the venereal cases in the San Juan jail.

The Institute of Tropical Medicine and Hygiene did all of the blood tests for the jails at San Juan and Ponce. The acting director, Dr. Gonzalez Martinez, personally supervised this work.

To the commissioner of the interior, Hon. Guillermo Esteves, credit must be given for the repair and remodeling of the jails and for providing facilities for a large number of men prisoners to be used on the public roads.

The municipalities aided in every manner possible. In Arecibo, the mayor of the city, as president of a welfare committee, supervised the welfare work in the jail hospital in that place and the municipality aided with its hospital facilities. In Ponce the greatest cooperation was given the department of justice by the municipal officials. Nurses and teachers were furnished for the women confined in the hospital and the municipality aided with its hospital facilities where necessary. San Juan loaned to the department of justice its facilities at the maternity hospital for the care and treatment of women prisoners during child birth.

The cooperation of the Red Cross has proved very effective. Maj. Garvin L. Payne, field director for Porto Rico and the Virgin Islands, came to San Juan with a fund of \$1,100 to be expended in the care and treatment of the women in the various hospitals. His activities and recommendations are contained in the exhibits to this report.

Because of the expenditures necessitated in the work and the great amount of funds needed therein, reports were made to the National Red Cross and to the Commission on Training Camp Activities. On September 5, 1918, the governor urgently requested, by cable, aid from the National Red Cross. The situation in Porto Rico was explained in full. The National Red Cross promised to cooperate in every manner possible. This organization is making a strong effort to have a certain bill in Congress amended so that funds will be released to relieve the situation in Porto Rico. For cooperation of the Red Cross see Exhibits Nos. 21 to 29.

A Central Committee on Social Welfare was organized in San Juan for the purpose of securing and administering funds for the local welfare work being done in Arecibo, Mayaguez, Ponce, and San Juan. The Hon. Leopoldo Feliu, member of the senate and president of the Four-Minute Men, was president of this central committee. Exhibits Nos. 30 to 33 illustrate the attitude of the committee on social welfare in San Juan, Arecibo, and Ponce. Mention should also be made of the work of the "Club de Damas" of Ponce, and the indorsements of the Women's Christian Temperance Union.

The Rotary Club of San Juan, composed of Porto Rican, American, and Spanish business and professional men, gave its inthusiastic support and cooperation. (Exhibit No. 34.)

The United States district judge, Hon. Peter J. Hamilton, offered, through the United States marshal, that part of the building in Mayaguez used by the United

States court as court room chambers and offices should it be needed. This well illustrates the attitude of the Federal officials toward the work in connection with the suppression of prostitution and vice in Porto Rico. The United States district attorney, Hon. Miles M. Martin, in addition to the splendid work which was done by him in the enforcement of the Federal laws in the San Juan district, has aided this department in innumerable other ways.

Credit must be given to the police for their work in the campaign because it was primarily due to the police that the necessary information could be presented by the district attorneys. The convictions secured in the municipal courts were always with the aid of the police. The helpful attitude of the police department may be ascertained from the circular sent by the chief of the insular police in August, 1918. The efficiency of the police force was praised by the United States attorney. The cooperation given by these officials is shown by Exhibits Nos. 13 and 45 to 47, inclusive.

Religious organizations were active in connection with this work and every religious sect in Porto Rico cooperated in the same. (Exhibits Nos. 35 to 42.)

Mention must also be made of the aid rendered by many individuals, not only in the work in connection with prosecutions, but also in the securing of funds and in caring for the women confined. (Exhibits Nos. 43 to 62.)

RECOMMENDATIONS.

The work in connection with the suppression of prostitution and vice in Porto Rico up to the present has been productive of far-reaching results. Porto Rico may well be proud of the physical condition of its troops at the time of their demobilization. No man was withheld from discharge of venereal disease contracted while he was in camp. The United States Government was not obliged to treat a large proportion of its soldiers in Porto Rico, as had been formerly necessary, for venereal diseases. The hospital care of venereal diseases is expensive and the loss to the Government would have been large, both directly and indirectly, in money, but more than the mere saving of money, the saving in human misery and disease has been far more important. Although the primary object of this work was to keep men fit for active military service, now that that need is over, the work begun under the stress of military necessity should be carried on with even greater force and strength than ever before. What can be done for an army encampment can be done for a civilian community. What benefits men about to join in the battle should surely be valuable for those in the paths of peace. In Porto Rico the problem at present is especially acute. There are at present about 539 prostitutes under medical care in three hospitals. Many have already been released because of the expiration of their terms, and within a short time, all will have completed their sentences and be at liberty. Although it has been the endeavor of the authorities in charge of the hospital to educate and aid these women in every possible manner, nevertheless many of them will probably ply their trade in the future. Perhaps falsely assured that the hospital care has rendered them innocuous, young men recently released from camp and civilians will be doubly open to infection. Therefore, I recommend that immediate steps be taken to prevent the reversion to conditions as they formerly existed.

EXTRACTS FROM TELEGRAM TO GOVERNORS FROM NEWTON D. BAKER, SECRETARY OF WAR, NOVEMBER 13, 1918.

"Signing of armistice in no way lessens responsibility of civil communities for protection of soldiers from prostitution and sale of liquor. Our States and cities ought never to lose the control which has been established or stop so vital a work. * * * War Department is determined to return soldiers to their families and to civil life uncontaminated by disease."

EXTRACT FROM STATEMENT BY JOSEPHUS DANIELS, SECRETARY OF THE NAVY, NOVEMBER 20, 1918.

"One of the compensations for the tragedy of war is the fact that an enlightened opinion is behind the organized campaign to protect the youth against venereal disease. The campaign begun in war to insure the military fitness of men for fighting is quite as necessary to save the men for civil efficiency."

EXTRACT FROM LETTER TO CIVIL AUTHORITIES FROM W. G. MCADOO, IN BEHALF OF THE UNITED STATES PUBLIC HEALTH SERVICE, NOVEMBER 20, 1918.

"Under the protection of the military authorities 4,000,000 soldiers and sailors received greater protection against venereal diseases than they received before the war in civil life. The cities and towns through which they go and to which they will return upon demobilization must be made safe. The fight * * * must be vigorously continued."

STATEMENT OF GEN. PERSHING, IN A LETTER TO LORD MILNER, MAY 7, 1918.

"Many of us who have experimented with licensed prostitution or kindred measures' hoping thereby to minimize the physical evils, have been forced to the conclusion that they are really ineffective. Abraham Flexner has argued the case so convincingly that on the scientific side it seems to me there is no escape from the conclusion that what he terms 'abolition' as distinguished from 'regulation' is the only effective mode of combating this age-long evil."

I have the honor to recommend, first, that the sanitation laws of Porto Rico be so amended as to provide that the insular board of health may, in an effective manner, regulate, control, and isolate persons infected with or suffering from venereal diseases. The present laws on this subject are very inadequate and, although the insular board of health and the executive council have endeavored to enact proper rules and regulations for the treatment of cases of venereal diseases, it has been found extremely difficult to promulgate regulations which will prove efficient and give adequate results. Mr. F. Tannenbaum, of this department, during my absence in the States, prepared and submitted for your approval a rough draft of an act to provide for such regulation and isolation on the part of the insular board of health. In accordance with the recommendations of the national authorities and various State boards of health, it was provided therein that all venereal diseases should be reported and all infections with respect thereto; that patients should be given instructions for preventing the spread of diseases and how to treat themselves; that all cases should be investigated by the insular health officers or local health officers; that stringent quarantine measures should be taken to protect persons from infection, and that druggists be forbidden to prescribe for venereal diseases. It was made unlawful for any person to knowingly expose another to infection with venereal disease, and prostitution would be repressed as a public health measure, health officials cooperating with the proper officials in the enforcement of laws directed against prostitution. Stringent penalties were provided for violations of the act. In addition to the recommendations contained in this act health officials should be specifically empowered to establish prophylactic stations wherever necessary.

It probably would be advisable to enable judges to impose indeterminate sentences in accordance with the nature of the offense and the danger of the accused to the community. It should not be the purpose to permit indeterminate sentences to be imposed solely because of the danger from venereal infection, inasmuch as the control of venereal diseases properly belongs to the department of health, but rather the purpose of such sentences should be to confine a person whose crime is made more serious, because of an unhealthy condition, for such period as is necessary to prevent a recurrence of such a serious offense. In other words, the idea of an indeterminate sentence in case of a prisoner infected with venereal disease is one for aiding the health authorities in the control and treatment of these diseases and to supplement legislation conferring upon the health department such control.

I heartily indorse the recommendation of Maj. Payne, field director of the American Red Cross for Porto Rico and the Virgin Islands, to the effect that it would be advisable in Porto Rico to establish health stations under the United States Public Health Service to help local officials to combat this disease. Congress should be made to realize the position of Porto Rico in this respect and the facilities existing here for eradicating such infections. Also I indorse the activities of the American Red Cross and other agencies to have the Chamberlain-Kahn Act amended so that Porto Rico may secure an appropriation to further the campaign against venereal infections.

It would be advisable for the insular government, probably with the aid of the Federal Government, to establish a rehabilitation farm for women. Such a farm could be provided at small expense and all women confined who are infected with venereal diseases could be treated therein by competent specialists.

The insular government should encourage in every manner possible the work of independent welfare societies. The welfare work so far accomplished has been remarkable. Recently, on January 4, 1919, several prominent men and women met in the Athenaeum in San Juan to establish an association to aid women released from the San Juan, Ponce, and Arecibo jails; to appoint local committees in all towns of the island; to combat, by all means possible, prostitution and illicit intercourse; and to alleviate the condition of beggars. A committee was formed, known as the committee on social reform and public charity. (Exhibit No. 63.) An organization, such as this one, would undoubtedly prove more effective with governmental cooperation than if the work is carried on without such assistance.

Respectfully submitted.

HOWARD L. KERN,
Attorney General.

EXHIBIT B.

Prostitution cases tried in the municipal courts during the fiscal year 1918-19.

	Convictions.	Acquittals.	Dismissals.
Adjuntas.....	27	3	
Aguadilla.....	45	6	1
Anasco.....	3		
Arecibo.....	73	1	
Barros.....	6		
Bayamon.....	34	3	1
Carolina.....	2		
Caguas.....	75	3	1
Camuy.....	23	7	
Cabo Rojo.....	21		
Ciales.....	1		
Coamo.....	15		
Cayey.....	2	6	2
Fajardo.....	3	4	1
Guayama.....	1	3	
Humacao.....	17	9	
Juana Diaz.....	21	6	1
Lares.....	15	4	
Manati.....	39		
Mayaguez.....	92	3	5
Patillas.....	3		
Ponce.....	139	29	4
Rio Grande.....	1	1	
Rio Piedras.....	28	3	1
Salinas.....	5	1	1
San German.....	19	5	5
San Sebastian.....	11	3	6
San Lorenzo.....	10	3	1
San Juan.....			
Utua.....	19		
Vieques.....	11		1
Vega Baja.....	13	3	
Yauco.....	33	14	
Yabucoa.....	7	1	
Total.....	814	121	31

EXHIBIT C.

Prostitution cases tried in the district courts during the fiscal year 1918-19.

	Convictions.	Acquittals.	Dismissals.
I. Original:			
Aguadilla.....			
Arecibo.....	1		
Guayama.....	19		
Humacao.....	3	1	
Mayaguez.....	6		
Ponce.....			
San Juan.....	33	8	13
Total.....	62	9	13
II. Appeals:			
Aguadilla.....		1	
Arecibo.....	1		
Guayama.....	5		
Humacao.....	3	5	
Mayaguez.....	9		
Ponce.....	79	4	
San Juan.....	8	9	
Total.....	105	19	1
III. Juvenile court: Mayaguez.....			
	2		
Grand total.....	169	28	14

EXHIBIT D.

Prostitution cases.—Résumé.

	Convictions.	Acquittals.	Dismissals.
I. Municipal courts.....	814	121	31
II. District courts:			
(a) Original cases.....	62	9	16
(b) Cases on appeal.....	105	19	1
III. Juvenile courts.....	2		
Total.....	983	149	48

EXHIBIT E.

REPORT OF LIEUT. HERMAN GOODMAN, VENEREAL OFFICER, CAMP LAS CASAS, P. R.,
IN RE THE TREATMENT OF WOMEN PROSTITUTES CONFINED IN THE DISTRICT JAILS
OF PORTO RICO.

JULY 20, 1919.

The confinement of a large number of prostitutes through the activities of the attorney general of Porto Rico (see special report to the governor, etc.) made medical examinations possible. At the hospital jail of Ponce, 43 women among the 332 confined, or more than 12 per cent, had infectious syphilitic lesions. The lesions had been all neglected and none of the patients had had any treatment prior to admission. Of the lesions seen we had:

Chancres.....	13
Mucous patches.....	2
Condylomata lata.....	19
Skin syphilides.....	8
Congenital syphilis.....	1

The routine blood Wassermann test was done on all patients. The number of 4+ Wassermann tests on women without lesions was 119. The percentage of women who were without lesions, but had 4+ Wassermann tests, was 42 per cent. This indicates that this number at least were in the latent tertiary stage or the stage of potential active syphilis. The syphilitic index was 50 per cent, since 165 of the 332 women were positive clinically and serologically.

In the San Juan institution we found 2 cases of chancre; 1 case of syphilitic ulcers of the cervix; 1 case of incised and ulcerating inguinal adenitis; 1 case of secondary macular papular syphilide; and 10 cases of condylomata lata. On routine blood examination of all patients, we found 62 with 4+ positive Wassermann reaction.

At Arecibo the social diseases among the 332 women were especially prevalent. Twenty per cent of the women had active infectious syphilitic lesions, and 70 per cent gave 4+ Wassermann reactions.

At the three jails 12 per cent of the women had dangerously infectious syphilis; 2 per cent more on routine blood examination had 4+ positive reactions. Since the Wassermann is effective in only 80 per cent of latent tertiary syphilis, this indicates that 8 per cent more were in the latent stage, free of lesions, in whom one examination did not give the positive results. The true index of syphilitic infection among the women is, therefore, 62 per cent.

Comparative figures from Vedder Syphilis and Public Health are very interesting.

Average figures are probably given by Kneeland, who says that the records of the Bedford Reformatory for girls show that 20.56 per cent of the 647 inmates have clinical manifestations of venereal disease. With the Wassermann test 224, or 48 per cent, gave positive reactions, and 30, or 6.4 per cent, gave doubtful reactions.

In a later statement, Davis says that 51 per cent of the inmates of this reformatory are syphilitic. Walker, in an examination of 337 prostitutes in Baltimore, found that 57 per cent gave a positive Wassermann reaction.

Sullivan and Spaulding find among 63 women arrested for alcoholism only, syphilis was found in 42.8 per cent, while 9.6 per cent show a doubtful Wassermann. Among 4 women arrested for alcoholism and other offenses, syphilis was found in 46.8 per cent, with 14.9 per cent more showing a doubtful Wassermann. Among 243 prostitutes syphilis was found in 65.5 per cent, with 9.5 per cent more showing a doubtful

Wassermann. Among the entire 500 consecutive cases who were all regular or irregular prostitutes, 44.7 per cent were undoubtedly syphilitic, while 9.5 per cent more had a doubtful Wassermann."

By a special study, made to answer the question "At what age is the prostitute most dangerous?" we determined that:

Summary.—One hundred and thirty-nine of the 721 girls were under 17 years of age. Forty-two per cent of this group had 3 or 4+ Wassermann reactions. Fifteen per cent of these young girls had active infectious syphilitic manifestations, such as chancre, mucous patch, or condylomata lata.

The age period from 18 to 22 gave us 388 prostitutes, or 48 per cent of the total studied. Of these 388, 193, or about 50 per cent, were strongly Wassermann positive and 11 per cent had active genital lesions of syphilis.

One hundred and forty-seven girls fell into the next age period, 23 to 27, of whom 45 per cent were serologically positive and 11 per cent had dangerous syphilitic manifestations.

Only 64 women were in the age group of 28 to 32, and 43 per cent of these had 3 or 4+ Wassermann reactions, but only 4 per cent were with active lesions.

Beyond 32 the number of women became much smaller and the percentage of positive Wassermann reactions became much lower, while none showed any active infectious manifestations of syphilis. Briefly stated:

33 to 37, 36 women.....	38 per cent Wassermann positive
38 to 42, 12 women.....	33 per cent Wassermann positive
42 to 52, 5 women.....	25 per cent Wassermann positive

These old women were not engaged in the active prostitute life, as might readily be supposed, but were either maintaining houses of ill-repute or acting as servants and lookouts for the younger girls.

In the series studied, we had 422 whites, 304 mulattoes, and 65 negroes. Even with such disparity in numbers, the percentage of Wassermann positive cases was constant—about 47 per cent for each color.

In the ratio of active syphilitic lesions, however, there was a marked difference. The whites gave 10 per cent, the mulattoes 13 per cent, and the negroes only 3 per cent with infectious syphilitic manifestations.

While the women arrested and sentenced because of the war activity of the insular officials were in the jails, every effort was made by medical authorities to render them noninfectious in regard to their venereal diseases and to improve their general health, which was very bad. The district jails at Arecibo, San Juan, Ponce, and Mayaguez were entirely reorganized for the reception of women only, and modern hospital services inaugurated in charge of competent physicians. In addition, the commanding officer of the United States base hospital at San Juan inspected the hospitals and the commissioner of health of Porto Rico was active and provided a specialist to work at the Arecibo hospital jail. The venereal officer of Camp Las Casas was deeply interested and took an active part in the diagnosis, and treatment of the women affected with venereal diseases and diseases of the skin. The field director of the American Red Cross for Porto Rico and the Virgin Islands was alive to the question of the relation of the health of the soldier and the freedom of transmissible diseases in the public women, and he furnished through the headquarters of the organization 500 tubes of arsenobenzol (606) and transportation for the officer to administer the drug. More than 1,400 intravenous injections were given to the syphilitic patients and more than 5,000 injections of mercury. The blood Wassermann was repeated after the courses of active treatment were completed in those instances where the patient was still under our care, and in almost half the cases the Wassermann was changed from 4+ positive to negative. In 12 per cent more the Wassermann was reduced, but in the remainder the Wassermann was not affected. We gave the most intensive treatments possible and followed up each course of salvarsan with the necessary mercury to a degree that we are certain that cures are permanent in most cases in which the Wassermann was reduced. Probably, if we could have had the patients under observation sufficiently long to repeat the course, more cures would have been effected. As it was, no case left the institution in an infectious state. Dr. Yordan, writing of the jail at Ponce, typified all the jails:

"The women received in six months what they could not receive outside in two years. One of the reasons for this was that we had control of every case and they reported for injections every day, which would be impossible in private practice. The physician in private practice is confronted with the fact that he can not make a patient continue treatment persistently. We have been able to push the treatment to the utmost and we get better results than in private practice. We would not have so many chronic invalids in society had they received the intensive antisiphilitic treatment

these women are getting. Not a woman here could have afforded to receive in private practice the treatment she has received while in this institution.

"We know that we have saved many from death that is directly traceable to syphilis; we hope to have removed many more from the road to chronic invalidism; and we have, furthermore, diminished the chances of having these women give birth to syphilitic children. We received women from communities where they were disseminating infectious and contagious diseases, and when released they are noncontagious and noninfectious, and many of them permanently cured.

"The patients have all gained in weight, have better complexions, and their general condition is better than when they were admitted. This is due to (a) a change in living conditions, (b) the absence of alcohol, (c) the absence of cigar smoking, (d) the medical treatment that was directed to their general condition as well as to their local troubles. They have received the best and most modern treatment for their venereal afflictions and the results have been gratifying."

The cases of gonorrhea were most valiently treated. Discharges ceased, after different periods of medication. In many cases examination after treatment failed to reveal the causative *Diplococcus* of Neisser but we are not so optimistic as to believe that we effected complete cures in many of the chronic cases.

Five cases of yaws or frambœsia were recognized and treated. The annual report of the board of health for 1917-18 gives a very interesting historical and clinical account of this disease in Porto Rico, together with photographs of a recent epidemic on the island. Although not ordinarily classed with the social diseases, yaws is very easily transmissible from one person to another through contact of a lesion to the broken skin surface of a healthy person.

Two cases of an heretofore unrecognized disease in Porto Rico were diagnosed among the inmates of the hospital jails. Ulcerating granuloma of the pudenda is the name of this disease and it is infectious and almost incurable. One of the patients had this disease seven years, during all of which time she carried on her life as an active prostitute. We did our utmost to cure these patients, using the medication found efficacious by the South American authorities, tartar emetic. Unfortunately, the cure takes years rather than months and we had to release the girls before rendering them harmless. One of the patients was transferred to the municipal hospital at Arocoibo and the other advised to apply for admission to the quarantine hospital at San Juan.

Scabies, ringworm, hookworm, lice, etc., were all treated. Patients were vaccinated against typhoid and smallpox. Several pregnant women were delivered, and miscarriages in others given necessary care.

The influenza epidemic gave the doctors and nurses more work to do, but the strict quarantine measures limited the ravages of the disease, and the death rate was negligible.

Minor nervous disorders were common, and in several cases actual insanity were properly disposed of.

The teeth were taken care of by qualified dentists, which made the injections of mercury less likely to lead to mouth trouble.

While in jail, teachers were provided for the ignorant. Courses in lace making and sewing were given and in many instances the girls were able to earn some money by the sale of their work. This reconstruction effort was nobly performed by the social service committees of the towns in which jail hospitals were situated.

That the main source of infection is the prostitute, and that with her isolation new cases of syphilis among the men of the community and from these to the women and children cease, was definitely proven in Porto Rico. The repressive measures made it difficult for the prostitute to ply her trade.

After six months in camp during which time the number of enlisted men rose from 250 to 12,000 only 20 new cases of venereal diseases were acquired, of which 4 were syphilitic infections. We are very proud of this low number among a population so recently under military control.

That the higher and more difficult purpose of keeping the men from getting new syphilitic infections, once they were in the Army succeeded, is shown by the remarkable low number of new infections we had. Our annual rate for all venereal disease is 3 per 1,000 for the first six months, of fresh infections. This compares very favorably with 467.30 which was the admission rate per 1,000 per annum during the first six months of the United States occupation of this island in 1899 (military government of Porto Rico, 1898-1900).

By educative and repressive measures it has been possible to avoid infection in this camp, at a great saving of health and wealth. The mobilization of 12,000 men would certainly have led to venereal disaster had any *laissez faire* attitude been taken. This can readily be seen from the figures quoted and from the fact that of over 800 prostitutes

arrested, 90 per cent had gonorrhea and 55 per cent were syphilitic, of which 12 per cent had active infectious genital lesions.

We consider as a conservative estimate that we have prevented at least 2,500 venereal infections at this camp, which would have been rendered this number ineffective for some period or other during the past six months. Besides, at this moment of demobilization, this would have meant retaining these men in the service until cured. The low average number of days for the hospitalization for venereal disease is 28 days. The clinic course must continue after discharge from the hospital, and in the syphilitic cases, at least two years of observation. Even then cure is not assured in 100 per cent of the cases although the patient may be without lesions. The hospital care of venereal cases is expensive, and the loss to the Government in money is large, both directly and indirectly.

The saving in money has certainly been considerable, but more than that, the saving in human misery and disease must needs have been greater. For each man infected, the roots and tendrils of the venereal diseases sink deeper and deeper into innocent wives and children. So although with the object primarily of keeping men fit for active military service for the battles of war, now that the need is over, the work we have done has not been in vain, and the young man of Porto Rico who was fortunate enough to get into the camp has fared much better than if the camp's policy of "no venereal disease" had not been established.

EXHIBIT F.

APRIL 26, 1919.

Hon. JUAN B. HUYKE,

Speaker House of Representatives, San Juan, P. R.

MY DEAR MR. HUYKE: I am inclosing herewith copy of senate bill No. 7, showing the amendments which can be made reducing the total amount of the bill by \$23,958.96 without detriment to the service of the department of justice and prisons. This decrease has been made possible by extreme economies that have been put in force since last November, and by transfers which have been made on account of these economies.

About \$8,000 of these economies are due to savings in salaries in all classes of positions, and are permanent economies. Many positions of municipal judges, secretaries, law officers, fiscals, clerks, and penal guards have been vacant for periods ranging from few days to several months, and the economies effected by these vacancies have resulted in balances which have been transferred to reduce the amount of the deficiency appropriations. These vacancies should not continue longer if it is possible to avoid such continuance, inasmuch as detriment is being caused in all of the service by so many vacancies.

Economies of about \$8,000 have been effected in the rations for prisoners. These rations were reduced from 20 cents for normal rations to 16 cents last December, but they should be immediately increased to 20 cents if the health of the prisoners is not to be impaired. However, the economies already effected in this line are permanent and it is, therefore, possible to count this as a reduction from the bill as originally presented.

Other permanent economies making up the difference between the bill as originally presented and as now amended, have been effected in all kinds of items, such as purchase of materials, traveling expenses, changing vacation terms of the court, and suspension of trials. These economies should not be continued further, because they will result in serious detriment to all of the services of the department of justice and prisons and will be a great inconvenience to all litigants and other persons interested.

I wish to call your attention especially to the very serious situation which exists in Mayaguez, Aguadilla, Ponce, Arecibo, and Humacao due to the damage to court buildings and jails by reason of the earthquakes. It has been impossible to pay rents for these various buildings, and payments can not be made until this bill is passed.

It is extremely urgent to pass this deficiency bill as amended in order to take care of pending vouchers from all over the island and to avoid further hardship to hundreds of creditors, especially poor persons who depend upon prompt payment for the rent of their courthouses and for supplies furnished.

If any further information is desired, I will be very glad to furnish the same upon request.

Respectfully,

HOWARD L. KERN,
Attorney General.

EXHIBIT G.

Circular No. 393.

APRIL 30, 1919.

To all officials of the department of justice of Porto Rico:

Owing to the earthquakes which occurred in October and November and to the large number of prisoners which this department has had during the fiscal year on account of the war activities of the department of justice, this department has been confronted with a difficult financial situation, and it has been necessary to exercise the greatest economy throughout the department of justice to carry over the department until the legislature makes a deficiency appropriation.

At the special session of the legislature in November, 1918, a deficiency appropriation of about \$25,000 was requested to carry over the department until the legislature could meet again in its regular session in February. This deficiency appropriation was passed unanimously in the senate but failed of approval in the house. Again in February a deficiency appropriation covering all of the estimated deficiencies for the fiscal year was presented to the legislature. This deficiency appropriation was unanimously passed by the Senate of Porto Rico but it has not as yet been approved by the house. It has been necessary to make many transfers from different appropriations in which there were balances to provide for the absolutely necessary running expenses in the items in which deficiencies had occurred. We are now within a few weeks of the end of the fiscal year, and it is impossible with the appropriations which are at present available to attend to all of the necessary running expenses of the various offices of the department of justice. I have repeatedly requested the more important branches of the department of justice to exercise the greatest economy until the deficiency appropriations are available. However, it is evident that still greater economies are necessary, and I, therefore, request that no direct purchase whatever be made on behalf of the department of justice without previous authorization from this office, and I further request that all possible expenses for supplies, transportation, witnesses, jurors, etc., be postponed until after July 1, unless a deficiency appropriation passes within the next few days, in which event you will be notified. No requisition should be sent to this office, if it is possible, by any means, to delay such requisition until after July 1. All investigations, except in cases of the greatest urgency, should be postponed until after July 1. All cases, as far as possible, should be set for trial immediately after July 1, unless cases can be tried without expenses for experts, witnesses, or jurors.

No printed letterheads, envelopes, etc., should be requested, but blank stationery should be used until July 1, 1919, after exhausting the present stocks.

The regular monthly trials of the municipal courts in municipalities outside of the capital of the municipal court district should be suspended for the month of June, and if possible for the month of May, and trial should be held immediately after July 1. The transportation of prisoners from the municipal jails to the district jails should, if possible, be suspended during the month of June, and they should be transferred immediately after July 1.

In short all possible economies should be made. In order not to congest the machinery of this office and in order to save money, you are requested to exercise these economies with the least possible amount of requests for further information from this office and in so far as possible, the use of the telegraph and telephone for long-distance communications should be eliminated, and all information should be transmitted by letter, inclosing as many communications in one envelope as possible.

Wherever a vacancy occurs in any office or position, no new temporary appointment should be made without the previous approval of this office, and, if possible, you are requested to refrain from requesting a new appointment until after July 1, unless a deficiency appropriation is available at an early date, in which case you will be notified.

I wish to express my appreciation for the cooperation of all the officers of the department of justice and their activity and support in all the important measures which this department has had to take during this fiscal year, as well as previously, and I request your earnest cooperation in reducing our expenses up until June 30, 1919, even at the expense of efficiency.

By these various measures I am sure that we will be able to terminate this fiscal year with a small balance to take care of unforeseen expenses. Without this sincere cooperation many innocent persons who have rented courthouses, offices, and jails, for the use of this department, where the buildings were destroyed by the earthquakes, and who have furnished automobiles and supplies, upon the direct solicitation of officers of the department of justice, without previous requisition approved by this

office, and who appeared as witnesses and jurors in the courts, and even officials who are entitled to salaries up to July 1, will be forced to undergo a long wait before receiving payment for such services and supplies, or, perhaps, will be unable to receive any payment whatsoever.

Respectfully,

HOWARD L. KERN,
Attorney General.

TABLE 1.—Statement showing work of supreme court for fiscal year 1918-19.

Cases pending June 30, 1918:	
Appeals in criminal cases.....	33
Appeals in civil cases.....	79
Administrative appeals.....	7
Original jurisdiction.....	4
	— 123
Cases docketed during fiscal year 1918-19:	
Appeals in criminal cases.....	113
Appeals in civil cases.....	236
Administrative appeals.....	49
Original jurisdiction.....	23
	— 421
Total.....	544
Cases decided during fiscal year 1918-19:	
Appeals in criminal cases.....	123
Appeals in civil cases.....	187
Administrative appeals.....	47
Original jurisdiction.....	34
	— 391
Cases pending June 30, 1919:	
Appeals in criminal cases.....	23
Appeals in civil cases.....	130
Administrative appeals.....	9
Original jurisdiction.....	2
	— 164
Total.....	536

TABLE 2.—Criminal cases tried in the district courts during the fiscal year 1918-19.

District court of—	Felonies and misdemeanors.								Total.	
	Pending June 30, 1918.	Presented during fiscal year 1918-19.	Total.	Disposed of during fiscal year 1918-19.						Pending June 30, 1919.
				Convictions.	Acquittals.	Filing or dismissals by—		Transfers to other courts.		
						Petition of the fiscal.	Lack of proof or jurisdiction.			
Aguadilla.....	3	99	102	59	11	14	7	.....	11
Arecibo.....	10	61	71	38	2	1	.....	.....	30
Guayama.....	30	111	141	68	6	9	.....	1	57
Humacao.....	30	73	103	63	6	16	4	.....	14
Mayaguez.....	.....	208	208	124	30	7	.....	.....	58
Ponce.....	46	57	103	28	8	27	.....	.....	40
San Juan (sec.2)	246	442	688	234	42	108	9	.....	296
Total.....	365	1,061	1,416	614	105	182	20	1	505	
									1,416	

TABLE 2.—*Criminal cases tried in the district courts during the fiscal year 1918-19—Continued.*

District court of—	Appeals from municipal and peace courts.										Appeals taken to Supreme Court.	Amount of fines and costs collected.	
	Pending June 30, 1918.	Presented during fiscal year 1918-19.	Total.	Disposed of during fiscal year 1918-19.						Pending June 30, 1919.			Total.
				Convictions.	Acquittals.	Filing or dismis- sals by—			Transfers to other courts.				
						Petition of the fiscal.	Defective indict- ments.	Lack of proof or jurisdic- tion.					
Aguadilla.....	1	29	30	11	11	3	1	.....	.....	4	30	4	\$471.00
Arecibo.....	.....	38	38	27	5	2	.....	3	.....	1	38	4	546.98
Guayama.....	6	52	58	42	6	3	1	.....	.....	6	58	6	1,233.23
Humacao.....	4	75	79	42	23	2	.....	7	.....	5	79	7	1,862.23
Mayaguez.....	3	62	65	27	22	1	.....	3	.....	12	65	13	412.21
Ponce.....	20	214	234	138	45	27	.....	.....	2	22	234	14	764.68
San J u a n (Sec. 2).....	133	310	443	213	88	87	.....	9	.....	46	443	25	4,681.32
Total....	167	780	947	500	200	125	2	22	2	96	947	73	9,971.50

¹ The difference between the total of the second column and the total of informations filed by the fiscals in the district courts (fourth column of Table 10) is due to 14 contempt cases originated in the following courts: Arecibo, Ponce 2, and San Juan 11.

² In 11 cases there were two sentences in each case.

RÉSUMÉ.

Pending June 30, 1918.....	532
Presented during fiscal year 1919.....	1,331
Total.....	8,363
Disposed of during fiscal year 1918.....	1,773
Pending June 30, 1919.....	601
Total.....	2,374
Convictions.....	1,114
Acquittals.....	306
Total.....	1,419
Appeals taken.....	73
Amount of fines and costs collected.....	\$9,971.50
Convictions.....	per cent. 62.94
Acquittals and dismissals.....	do. 37.06
Convictions.....	do. 78.51
Acquittals.....	do. 21.49

TABLE 3.—*Cases of homicide tried in the district courts during the fiscal year 1918-19.*

District court of—	Murder.				Manslaughter.				
	First degree.		Second degree.		Voluntary.		Involuntary.		
	Convictions.	Acquittals.	Convictions.	Acquittals.	Convictions.	Acquittals.	Convictions.	Acquittals.	Total.
Aguadilla.....								1	1
Arecibo.....					1	1			2
Guayama.....								1	5
Humacao.....			7		2		1	1	11
Mayaguez.....			2		3	1			6
Ponce.....			1		1	1			3
San Juan.....	1	1	4	1	3		2	1	13
Total.....	1	1	14	1	14	3	3	4	41

RÉSUMÉ.

Cases tried.....	41
Convictions.....	32
Acquittals.....	9

TABLE 4.—*Jury trials in the district courts during the fiscal year 1918-19.*

District court of—	Convictions.	Acquittals.	Filing or dismissals.	Transfers to other courts.	Total.
Aguadilla.....	4	5	.....	.....	9
Arecibo.....	3	1	.....	.....	4
Guayama.....	6	3	.....	.....	9
Humacao.....	6	6	1	.....	13
Mayagüez.....	2	2	.....	.....	4
Ponce.....	1	5	.....	.....	6
San Juan.....	26	10	.....	.....	36
Total.....	48	32	1	.....	81

Convictions.....	per cent..	59.2
Acquittals and dismissals.....	do.....	40.7
Convictions.....	do.....	60.00
Acquittals.....	do.....	40.00

TABLE 5.—*Felony cases tried in the district courts without jury, during the fiscal year 1918-19.*

District court of—	Convictions.	Acquittals.	Filing or dismissals.	Transfers to other courts.	Total.
Aguadilla.....	9	.....	7	.....	16
Arecibo.....	15	.....	.....	.....	15
Guayama.....	13	.....	5	1	19
Humacao.....	32	.....	13	.....	45
Mayagüez.....	5	2	1	.....	8
Ponce.....	14	.....	21	.....	35
San Juan.....	72	.....	44	.....	116
Total.....	160	2	91	1	254

Convictions.....	per cent..	63.24
Acquittals and dismissals.....	do.....	36.76
Convictions.....	do.....	98.73
Acquittals.....	do.....	1.27

TABLE 6.—*Cases of misdemeanor tried originally in the district courts during the fiscal year 1918-19.*

District court of—	Convictions.	Acquittals.	Filing or dismissals.	Transfers to other courts.	Total.
Aguadilla.....	46	6	14	.....	66
Arecibo.....	20	1	1	.....	22
Guayama.....	49	3	4	.....	56
Humacao.....	25	.....	6	.....	31
Mayagüez.....	117	26	6	.....	149
Ponce.....	13	3	6	.....	22
San Juan.....	136	32	73	.....	241
Total.....	406	71	110	.....	587

Convictions.....	Per cent.	69.17
Acquittals and dismissals.....	do.....	30.83
Convictions.....	do.....	85.12
Acquittals.....	do.....	14.88

TABLE 7.—*Criminal cases tried in the district courts during the fiscal year 1918-19.*

Crimes.	Convictions.	Acquittals.	Filing or dismissals.	Transfers to other courts.	Total.
Against persons.....	150	52	28	2	241
Against reputation.....	8	2	4		14
Against decency.....	42	12	63		117
Against property.....	215	37	54		306
Prejudicial to administration of public justice.....	101	10	21		132
Against good morals.....	152	35	12	1	200
Involving the violation of laws enacted in the exercise of the police power.....	254	100	81		435
Unclassified.....	183	57	88		328
Grand total.....	1,114	305	351	3	1,773

Convictions.....	Per cent. 62.94
Acquittals and dismissals.....	do..... 37.06
Convictions.....	do..... 78.51
Acquittals.....	do..... 21.49

TABLE 8.—*Comparative statement of totals showing record of criminal cases in the district courts for five years.*

Fiscal year.	Presented.	Disposed of.	Convictions.	Acquittals. ¹	Appeals to supreme court.	Pending at the end of fiscal year.
1914-15.....	2,802	3,004	1,837	528	180	377
1915-16.....	2,081	2,072	1,367	353	187	386
1916-17.....	1,838	1,800	1,227	279	108	374
1917-18.....	2,239	2,064	1,349	355	110	532
1918-19.....	1,831	1,773	1,114	305	73	604

¹ These figures do not include dismissals.TABLE 9.—*Appeals from municipal and peace courts decided in each district court during the fiscal year 1918-19.*

District court of—	Municipal courts.					Peace courts.				
	Convictions.	Acquittals.	Filing or dismissals.	Transfers to other courts.	Total.	Convictions.	Acquittals.	Filing or dismissals.	Transfers to other courts.	Total.
Agua Fria.....	11	11	4		26					1
Arizpe.....	27	5	4		36			1		1
Guaymas.....	39	6	4		49	3				3
Humacao.....	41	22	9		72	1	1			2
Laguna.....	26	20	2		48	1	2	2		5
Monterrey.....	131	39	27	2	199	7	6			13
San Juan.....	204	86	86		376	9	2	10		21
Total.....	479	189	136	2	806	21	11	13		45

NOTE.—The above cases were tried de novo and not on the record.

TABLE 10.—*Complaints handled in fiscalias during the fiscal year 1918-19.*

District court of—	Pending in fiscalia June 30, 1918.	Presented during fiscal year 1918-19.	Total.	Informations filed in district court.	Dismissed before accusation.	Transferred to other courts.	Pending in fiscalia June 30, 1919.	Total.
Aguadilla.....		160	160	99	30	7	24	160
Arecibo.....		133	133	60	64	9	133	133
Guayama.....		221	221	111	87	23	221	221
Humacao.....	2	222	224	73	119	30	2	224
Mayaguez.....	14	333	347	208	139		2	347
Ponce.....		234	234	55	117	17	45	234
San Juan.....	2	705	707	431	231	27	18	707
Total.....	18	2,006	2,026	1,037	787	113	89	2,026

TABLE 11.—*Civil cases tried in the district courts during the fiscal year 1918-19.*

District court of	Pend- ing June 30, 1918.	On com- plaints filed in district courts and ap- peals from muni- cipal courts.	Total.	Disposed of during fis- cal year 1918-19.			Pend- ing June 30, 1919.	Total.	Appeals taken.	Amount of costs collected.
				Tried.	Filing or dis- missals.	Trans- fers to other courts.				
Aguadilla.....	60	223	283	177	4		102	283	2	\$2,230.13
Arecibo.....	395	464	859	286	70		503	859	9	5,115.79
Guayama.....	391	351	742	215	14	1	512	742	6	3,600.34
Humacao.....	306	735	1,041	497	103	1	440	1,041	29	7,688.76
Mayaguez.....	288	635	903	522	87	2	292	903		6,872.73
Ponce.....	488	1,160	1,648	827	116	15	690	1,648	18	10,568.66
San Juan:										
Section 1.....	2,033	1,138	3,171	723	111	128	2,209	3,171		11,502.08
Section 2.....	204	351	555	171		38	346	555	11	2,540.47
Total.....	4,145	5,057	9,202	3,418	505	185	5,094	9,202	75	50,210.87

RESUME.

Pending June 30, 1918.....	4,145
Presented during fiscal year 1918-19.....	5,057
Total.....	9,202
Disposed of during fiscal year 1918-19.....	4,106
Pending June 30, 1919.....	5,094
Total.....	9,202
Amount of costs collected.....	\$50,210.87

TABLE 12.—*Criminal cases tried in the municipal courts during the fiscal year 1918-19.*

Municipal court of—	Pend- ing June 30, 1918.	Pre- sented during fiscal year 1918- 19.	Total.	Disposed of during fiscal year 1918-19 by—				Pend- ing June 30, 1919.	Total.	Ap- peals taken.	Amount of fines and costs col- lected for the insular treasury.
				Con- vic- tions.	Ac- quit- tals.	Filing or dis- missals.	Trans- fers to other courts.				
Adjuntas.....		473	473	361	80	32			473	3	\$488.30
Aguadilla.....	1	915	916	576	280	40	8	12	916	14	2,338.23
Anasco.....		296	296	220	53	15	8		296	9	483.42
Arecibo.....		1,367	1,367	1,129	175	55		8	1,367	13	2,591.47
Barros.....	2	347	349	223	47	77	2		349	2	574.35
Bayamon.....		1,820	1,820	1,343	309	168			1,820	166	5,358.00
Cabo Rojo.....		480	480	291	118	22	30	19	480	7	827.50
Caguas.....	6	1,400	1,406	1,040	179	184	2	1	1,406		3,617.84
Camuy.....	3	614	617	413	119	50	26	9	617	9	1,296.99
Carolina.....	4	744	748	572	124	51		1	748		1,318.85
Cayey.....	1	968	969	494	323	119	33		969	7	2,320.72
Ciales.....	3	378	381	213	116	41	3	8	381	1	943.96
Coamo.....	2	278	280	213	49	6	8	4	280	17	503.66
Fajardo.....	3	858	861	526	209	76		50	861	14	2,168.01
Guayama.....	5	851	856	558	186	107		5	856	36	1,610.86
Humacao.....	2	752	754	491	145	87	24	7	754	14	1,513.84
Juana Diaz.....	2	1,164	1,166	913	130	119		4	1,166	6	1,185.46
Lares.....		347	347	186	83	66	10	2	347	6	404.12
Manati.....	1	665	666	491	78	81	13	3	666	12	1,563.65
Mavaguez.....	1	1,596	1,597	1,002	422	172		1	1,597	36	1,924.53
Patillas.....	3	380	383	275	75	31		2	383	9	777.87
Ponce.....		3,396	3,396	2,470	599	318	7	2	3,396	145	5,287.70
Rio Grande.....	11	565	576	333	151	69	8	15	576	4	1,005.86
Rio Piedras.....	1	827	828	640	129	55	4		828	10	2,457.44
Salinas.....	4	759	763	536	103	86	7	31	763	3	1,682.05
San German.....		752	752	423	191	71	32	35	752	7	1,235.11
San Juan.....	4	2,737	2,741	1,888	656	197			2,741	72	7,889.48
San Lorenzo.....		661	661	336	225	65	3	32	661	14	742.10
San Sebastian.....	1	312	313	155	101	44	11	2	313	7	233.59
Utua.....	3	653	656	501	115	38		2	656	6	1,221.40
Vega Baja.....	2	875	877	628	137	100	12		877	19	1,630.75
Vieques.....	2	438	440	340	40	43	17		440	2	2,044.21
Yabucoa.....	4	1,000	1,004	718	170	59	19	38	1,004	3	1,244.60
Yauco.....	2	1,287	1,289	881	259	124	21	4	1,289	23	1,952.12
Total.....	73	30,955	31,028	21,379	6,176	2,868	308	297	31,028	696	62,405.07

RESUME.

Pending June 30, 1918.....	73
Presented during fiscal year 1918-19.....	30,955
Total.....	31,028
Disposed of during fiscal year 1918-19.....	30,731
Pending June 30, 1919.....	297
Total.....	31,028
Appeals to district courts.....	696
Amount of fines and costs collected.....	\$62,405.07
Convictions.....	per cent. 70.27
Acquittals and dismissals.....	do. 29.73
Convictions.....	do. 77.59
Acquittals.....	do. 22.14

TABLE 13.—Civil cases tried in the municipal courts during the fiscal year 1918-19.

Municipal court of—	Pend- ing June 30, 1918.	Pre- sented during fiscal year 1918-19.	Total.	Disposed of during fiscal year 1918-19.			Pend- ing June 30, 1919.	Total.	Ap- peals taken.	Amount of costs collected.
				Tried.	Filing or dis- missals.	Trans- fers to other courts.				
Adjuntas.....	45	16	61	4	4	.....	53	61	1	\$169.90
Aguadilla.....	12	74	86	36	12	.....	38	86	2	516.67
Anasco.....	19	33	52	12	30	.....	10	52	.....	164.22
Arecibo.....	74	172	246	63	56	.....	127	246	3	815.28
Barros.....	35	14	49	6	20	.....	23	49	3	93.45
Bayamon.....	617	250	867	98	11	.....	758	867	10	1,369.10
Cabo Rojo.....	14	80	94	35	33	.....	26	94	4	466.56
Caguas.....	209	156	455	106	328	1	20	455	3	972.65
Camuy.....	30	80	110	41	30	.....	39	110	1	527.08
Carolina.....	74	30	104	23	4	.....	77	104	4	147.80
Cayey.....	243	104	347	127	179	.....	41	347	7	760.53
Ciales.....	66	91	157	70	40	.....	47	157	.....	522.78
Coamo.....	68	23	91	26	6	3	56	91	2	123.94
Fajardo.....	575	79	654	29	.....	.....	625	654	2	369.72
Guayama.....	101	72	173	28	19	.....	126	173	2	524.94
Humacao.....	106	52	158	38	11	1	108	158	3	342.65
Juana Diaz.....	39	37	76	3	19	1	53	76	2	306.06
Lares.....	16	32	48	22	18	.....	8	48	1	249.07
Manati.....	139	110	249	59	98	1	91	249	4	710.79
Mayaguez.....	90	248	338	128	146	1	63	338	18	1,241.65
Patillas.....	29	30	59	17	5	1	36	59	.....	260.32
Ponce.....	200	227	517	115	199	2	201	517	5	1,353.37
Rio Grande.....	74	56	130	36	4	.....	90	130	6	290.29
Rio Piedras.....	57	59	116	29	7	.....	80	116	1	264.59
Salinas.....	83	17	100	12	1	1	86	100	3	167.71
San German.....	47	138	185	92	20	.....	73	185	1	902.39
San Juan.....	2,060	920	2,970	625	519	4	1,822	2,970	26	3,897.08
San Lorenzo.....	331	39	370	9	.....	.....	361	370	.....	184.61
San Sebastian.....	14	46	60	18	20	.....	22	60	.....	272.79
Utua.....	34	64	98	30	33	.....	35	98	5	526.43
Vega Baja.....	26	42	68	22	19	.....	27	68	.....	247.89
Vieques.....	23	11	34	9	.....	.....	25	34	3	75.89
Yabucoa.....	110	63	173	32	10	1	180	173	3	496.69
Yauco.....	113	84	197	51	23	1	123	197	8	545.19
Total.....	5,943	3,549	9,492	2,051	1,924	18	5,499	9,492	133	19,778.57

RÉSUMÉ.

Pending June 30, 1918.....	5,943
Presented during fiscal year 1918-19.....	3,549
Total.....	9,492
Disposed of during fiscal year 1918-19.....	3,993
Pending June 30, 1919.....	5,499
Total.....	9,492
Appeals to district courts.....	133
Amount of costs collected.....	\$19,778.57

TABLE 14.—*Criminal cases tried in the peace courts during the fiscal year 1918-19.*

Court of peace of—	Pend- ing June 30, 1918.	Pre- sented during fiscal year 1918-19.	Total.	Disposed of during fiscal year 1918-19 by—				Pend- ing June 30, 1919.	Total.
				Convic- tions.	Acquit- tals.	Filing or dis- missals.	Trans- fers to other courts.		
Aguada.....		16	16	16					16
Aguaadilla.....		67	67	60	7				67
Agua Buenas.....		53	53	15	38				53
Albionito.....	8	44	52	42	2		1	7	52
Anasco.....		185	185	78	110				185
Arroyo.....		85	85	70	2	13			85
Barceloneta.....		76	76	61	13	2			76
Barranquitas.....		49	48	40	6	2			48
Bayamon.....	8	407	415	339	41	24		11	415
Caguas.....		168	168	109	5	53		1	168
Catano.....		295	295	249	29	17			295
Cayey.....		130	130	115	13	2			130
Ceiba.....		33	33	33					33
Cidra.....		22	22	17	3		2		22
Comerio.....	1	106	107	90	6	9	2		107
Corozal.....		23	23	15	8				23
Culebra.....		5	5	5					5
Dorado.....		68	68	56	3		6	3	68
Fajardo.....	33	47	80	13	13	13		41	80
Juanica.....	3	78	81	59	14	5	1	2	81
Juayama.....	7	114	121	101	12	8			121
Juayanilla.....		38	38	38					38
Juaynabo.....		29	29	27	1			1	29
Jurabo.....	2	104	106	90	14	1		1	106
Llano.....		697	697	332	2		361		697
Mormigueros.....	16	91	97	87	9	9	1		97
Munacao.....	2	122	124	113	7	4			124
Nabola.....		46	46	33	9			4	46
Nayaya.....		156	156	115	33	8			156
Nueces.....	1	125	126	113	5	8			126
Nuevas.....		46	46	33	12	1			46
Nuevas Marias.....	1	42	42	40	1		1		42
Nuevas Piedras.....		42	42	40	1		1		42
Poza.....	8	133	141	105	23	8		5	141
Puquillo.....	1	13	14	14					14
Ranati.....	4	351	355	305	17	25		8	355
Rarico.....		30	30	11	19				30
Ranabo.....		30	30	24	3	1	2		30
Rayaguez.....	16	612	628	459	128	46			628
Roca.....		89	89	42	45	2			89
Rorovis.....		22	22	18	4				22
Raguabo.....	5	94	99	76	9	4		10	99
Raranjito.....		48	48	37	11				48
Renuelas.....	6	78	84	65	3	1		15	84
Ronce.....	1	798	799	665	67	51		16	799
Ruebrahillas.....	1	132	132	26	2	8	96		132
Rincon.....		41	41	39	2				41
Rio Grande.....		50	50	43	5			2	50
Rubana Grande.....		84	84	68	13	3			84
Ruinas.....	8	112	120	95	11	7		7	120
Ran German.....		263	263	145	29	79			263
Ran Juan.....	6	1,446	1,452	1,113	263	70		6	1,458
Ran Isabel.....		117	117	111		6			117
Roa Alta.....	2	71	73	37	36				73
Roa Baja.....		122	122	38	3	76		7	122
Rujillo Alto.....		18	18	14	4				18
Roa Alta.....		118	118	98	18	2			118
Ruibalba.....	1	10	11	10				1	11
Rubaco.....	8	71	79	61	5	5		8	79
Total.....	138	8,490	8,637	6,300	1,124	575	473	156	8,637

TABLE 14.—Criminal cases tried in the peace courts during the fiscal year 1918-19—Con.

Court of peace of—	Appeals to district courts.	Cases in which the judge acted as committing magistrate.	Fines collected.	Expenses of courts.	
				Salaries.	Materials and rent of houses.
Aguada.....		102	\$4.00	\$1,080.00	\$6.00
Aguadilla.....			20.00	720.00	
Agua Buenas.....		312	29.00	960.00	10.00
Albionito.....		7	59.50	420.00	12.00
Anasco.....			64.80	732.00	
Arroyo.....		212	93.00	460.00	39.65
Barceloneta.....		161	115.70	720.00	10.00
Barranquitas.....		215	51.40	360.00	
Bayamon.....	1		336.43	720.00	35.35
Caguas.....			186.00	860.00	30.00
Catano.....	13	4	388.35	360.00	10.00
Cayey.....		5	157.40	900.00	6.00
Ceiba.....		170	49.00	354.00	11.75
Cidra.....		180	32.00	360.00	
Comerio.....		200	124.50	720.00	9.40
Corozal.....		135	38.40	355.00	
Culebra.....		2	25.00		
Dorado.....	6	167	105.79	720.00	15.00
Fajardo.....	1	2	93.00	600.00	
Guanica.....		363	45.95	360.00	140.00
Guayama.....	2		95.25	720.00	
Guayanilla.....		182	54.00	792.00	20.00
Guaynabo.....		9	38.50	360.00	
Gurabo.....		205	165.50	420.00	55.00
Hatillo.....		5	130.10	540.00	17.21
Hormigueros.....		78	51.00	360.00	52.53
Humacao.....		12	159.60	1,200.00	
Isabela.....		18	22.00	720.00	24.00
Jayuya.....		4	62.00	360.00	9.00
Juncos.....		8	171.50	600.00	15.00
Lajas.....		245	30.50	720.00	21.65
Las Marias.....				600.00	37.00
Las Piedras.....		208	47.00	360.00	
Loiza.....		7	205.25	720.00	
Luquillo.....			45.00	360.00	
Manati.....	3		288.10	360.00	1.44
Maricao.....			9.00	600.00	10.00
Maunabo.....			55.00	600.00	8.00
Mayaguez.....	7		755.08	2,100.00	40.00
Moca.....		377	34.25	694.00	38.60
Morovis.....			17.00	600.00	35.00
Naguabo.....	1	145	139.25	600.00	50.00
Naranjito.....		9	40.00	360.00	2.40
Penuelas.....	1	34	46.85	360.00	30.00
Ponce.....	17	30	707.30	2,360.00	6.00
Quebradillas.....		21	20.50	360.00	10.00
Rincon.....		148	1.00	792.00	5.50
Rio Grande.....		62	54.50	600.00	80.00
Sabana Grande.....		158	45.00	600.00	5.00
Salinas.....		26	154.30	780.00	18.30
San German.....		10	126.70	720.00	
San Juan.....	3		1,567.54	2,100.00	330.50
Santa Isabel.....		8	157.00	600.00	17.00
Toa Alta.....		200	36.25	360.00	15.00
Toa Baja.....	1	418	47.75	450.00	17.00
Trujillo Alto.....		190	41.70	600.00	
Vega Alta.....		336	44.50	720.00	
Villalba.....		6	13.00		
Yabucoa.....			97.60		
Total.....	56	5,355	7,804.08	37,241.00	1,280.91

¹ By clerical error the court reported 5 cases instead of 6.

The peace courts have no jurisdiction in civil cases.

RESUMÉ.

Pending June 30, 1918.....	133
Presented during fiscal year 1918-19.....	5,000
Total.....	5,133
Disposed of during fiscal year 1918-19.....	5,000
Pending June 30, 1919.....	133
Total.....	5,133
Cases investigated as committing magistrate.....	5,133
Fines collected.....	\$7,804.08

Expenses of court:		
Salaries.....		\$37,241.00
Materials.....		\$1,290.81
Total.....		\$38,531.81
Convictions.....	per cent..	78.78
Acquittals and dismissals.....	do.....	21.22
Convictions.....	do.....	84.88
Acquittals.....	do.....	15.12

TABLE 15.—Cases of prohibited weapons tried in the district courts during the fiscal year 1918-19.

District court of—	Pend- ing June 30, 1918.	On com- plaint filed in dis- trict courts.	On appeal from mu- nici- pal and peace courts.	Total.	Disposed of during fiscal year 1918-19.			Pend- ing June 30, 1919.	Total.	Confiscated weapons.			
					Con- vic- tions.	Ac- quit- tals.	Filing, dismiss- als or trans- fers to other courts.			Re- vol- vers.	Knives.	Ma- che- tes.	Other weap- ons.
Aguadilla.....		21		21	16	4	1		21	2	7	1	11
Arecibo.....			1	1		1			1				
Guayama.....	1	4	4	5	4			1	5	1		1	
Humacao.....		1	1	1		1			1	1		1	
Mayaguez.....		37		37	26	3	1	7	37	8	17		1
Ponce.....			2	2	2				2				
San Juan.....	3	1	6	10	5			2	3				
Total.....	4	50	14	77	53	9	4	11	77	12	24	3	12

TABLE 16.—Cases of prohibited weapons tried in the municipal courts during the fiscal year 1918-19.

Municipal court of—	Pend- ing June 30, 1918.	Pre- sented during fiscal year 1918- 19.	Total.	Disposed of during fiscal year 1918-19.			Pend- ing June 30, 1919.	Total.	Confiscated weapons.			
				Con- vic- tions.	Ac- quit- tals.	Filing, dismiss- als or trans- fers to other courts.			Re- vol- vers.	Knives.	Ma- che- tes.	Other weap- ons.
Adjuntas.....		14	14	12	2			14	2	9		3
Aguadilla.....		3	3	2	1			3	2	1		
Anasco.....												
Arecibo.....		58	58	49	8	1		58	20	13	5	11
Barros.....		6	6	5		1		6	2	3		
Bayamon.....												
Cabo Rojo.....												
Caguas.....												
Camay.....		15	15	15				15	2	9	1	3
Carolina.....		10	10	9		1		10	3	2	2	5
Cayey.....		1	1	1				1				
Ciales.....		3	3	3				3		1	2	
Coamo.....		3	3	1		2		3	2		1	
Fajardo.....		2	2	2				2	1	1		
Guayama.....												
Humacao.....												
Juana Diaz.....		25	25	20	1	4		25	10	5		10
Lares.....		14	14	6		8		14	1	6	2	5
Manati.....												
Mayaguez.....												
Patillas.....		7	7	7				7		4		3
Ponce.....		2	2	2				2	1	1		
Rio Grande.....												
Rio Piedras.....		51	51	47	4			51	8	19	9	15
Salinas.....		1	1	1				1	1			
San German.....		1	1	1		6	1	7				
San Juan.....		1	1	1				1	1			
San Lorenzo.....		22	22	15	3	2	2	22	4	6	4	8
San Sebastian.....		8	8	6	2			8	1	5		
Ututo.....		3	3	3				3		1	1	1
Vega Baja.....		7	7	7				7	3	4		
Vieques.....		24	24	24				24	7	2	6	9
Yabucoa.....												
Yauco.....		28	28	24	3	1		28	4	11		4
Total.....		315	315	282	24	26	3	315	75	108	33	77

TABLE 17.—Cases of prohibited weapons tried in the justice of the peace courts during the fiscal year 1918-19.

Court of peace of—	Pre- sented during fiscal year 1918-19.	Disposed of during fiscal year 1918-19 by—			Total.	Confiscated weapons.			
		Con- victions.	Ac- quittals.	Filing dismiss- als or transfers to other courts.		Re- volv- ers.	Knives.	Ma- chets.	Other weap- ons.
Aguada.....									
Aguadilla.....									
Aguas Buenas.....	14	13	1		14		1	3	9
Albionito.....	10	10			10	3	4	2	1
Anasco.....	12	12			12	2	10		
Arroyo.....	4	4			4	3	1		
Barcelonita.....	15	15			15	2	8		5
Barranquitas.....	3	3			3	1	1		1
Bayamon.....	13	12	1		13	3	5		5
Caguas.....	37	35		2	37	12	11	5	9
Catano.....	11	11			11	3	1	1	6
Cayey.....	18	18			18	9	6	1	2
Ceiba.....	12	7	2	3	12	1	1	3	7
Cidra.....	15	15			15	3	4	3	5
Comerio.....	25	23		2	25	5	8		10
Corozal.....	4	4			4	4			
Culebra.....	2	2			2		1	1	
Dorado.....	7	7			7	2			4
Fajardo ¹	33	17	8		25	6	14	8	5
Guanica.....	7	6		1	7	2	1		4
Guayama.....	19	19			19	7	4	3	5
Guanilla.....	7	7			7	2	5		
Guainabo.....	12	11	1		12	2	2	6	1
Gurabo.....	17	15	1	1	17	6	2	2	6
Hatillo.....	15	15			15	3	4	5	3
Hormigueros.....	2			2	2				
Humacao.....	29	25		4	29	6	10	2	11
Isabela.....	5			5	5		3		2
Jayuya.....	7	5	1	1	7		1	1	3
Juncos.....	33	32	1		33	9	13		12
Lajas.....									
Las Marias.....									
Las Piedras.....	13	11	1	1	13		2	8	3
Loiza.....	14	12	2		14	4	6	3	
Luquillo.....	8	8			8	4	1	2	2
Manati.....	20	19		1	20	5	6		9
Maricao.....	3	3			3	2		1	
Maunabo.....	11	9	1	1	11	1	3	3	4
Mayaguez.....									
Moca.....	5			5	5	2			3
Morovis.....	3	3			3	1	1		1
Naguabo.....	15	13		2	15	6	6	2	1
Naranjito.....	3	3			3		2		1
Penuelas.....	13	8	2	3	13	1	6		6
Ponce.....	48	45	3		48	17	17	1	10
Quebradillas.....				1	1				
Rincon.....	3			3	3				
Rio Grande.....	7	7			7	2	3	1	1
Sebana Grande.....	1	1			1		1		
Salinas.....	25	25			25	13	2	1	9
San German.....	1			1	1				
San Juan.....	51	46	5		51	26	20	4	26
Santa Isabel.....	15	15			15	5	6	1	3
Tos Alta.....	4	4			4	2			2
Tos Baja.....	3	3			3			2	2
Trujillo Alto.....	13	13			13	5	5	1	1
Vega Alta.....	9	5	4		9	2	1	5	1
Villalba.....	5	5			5		2	2	1
Yabucoa.....	10	9	1		10	1	3	2	4
Total.....	692	610	35	39	684	195	214	86	286

¹ This court left 8 cases pending on June 30, 1919.

No case pending on June 30, 1918.

TABLE 18.—*Prohibition cases tried in the district courts during the fiscal year 1918-19.*

	Convictions.	Acquittals.	Dismissals.	Pending.
I. Original:				
Aguadilla				
Arecibo				
Guyama				
Humacao	1			
Mayaguez				
Ponce				
San Juan	1		3	
Total	2		3	
II. Appeals:				
Aguadilla	2	1		
Arecibo	1	1		
Guayama				
Humacao		1		
Mayaguez		1		1
Ponce		1	2	
San Juan	3		12	
Total	6	5	14	1
Grand total	8	5	17	1

TABLE 19.—*Prohibition cases tried in the municipal courts during the fiscal year 1918-19.*

	Convictions.	Acquittals.	Dismissals.	Pending.
Adjuntas	1	1		
Aguadilla	6	1		
Anasco		1		
Arecibo	11	1		
Barros				
Bayamon	11	3	3	
Carolina	7			
Caguas	3	1		
Camuy	1	1		
Cabo Rojo	6	2		
Calles				
Coamo	1			
Cayey	11	4	1	
Fajardo	5	2		8
Guayama	1	1		1
Humacao	4	5	1	
Huana Diaz	1			
Lares	1			
Manati	5	1		
Mayaguez	7	4		
Patillas	2			
Ponce	26	7	1	1
Rio Grande				1
Rio Piedras	2			
Salinas				1
San German	2	1		
San Sebastian	1			
San Lorenzo	3	3	1	
San Juan	12	2	1	
Uturo	2	1		
Vieques	2			
Vega Baja	3			
Vauco	6	6		
Vieques	7	5	1	
Total	150	53	9	12

TABLE 19A.—*Résumé—Cases of prohibition.*

	Convictions.	Acquittals.	Dismissals.	Pending.
Municipal courts	150	53	9	12
District courts:				
(a) Original cases	2		3	
(b) Cases on appeal	6	5	14	1
Total	158	58	26	13

TABLE 30.—*Registries of property, fiscal year 1918-19.*

Registry of property of—	Municipalities comprised therein.	Area in square miles.	Population, census of 1910.	Number of employees.	Cost of salaries and house rent of each registry.	Documents.					Documents regis- tered during fiscal year 1918-19.				Documents pending June 30, 1919.	Admini- trative appeals before supreme court.			Amount of fees collected.	Total of property involved in the docu- ments registered.			
						Pending, June 30, 1918.		Presented during fiscal year 1918-19.	Total.	Documents.			Total.	With curable de- fects.		With incurable de- fects.	Total.	Decided in favor of the registrar.		Decided against the registrar.	Total.	Urban.	Rural.
						Pending, June 30, 1918.	Presented during fiscal year 1918-19.			Correct.	With curable de- fects.	With incurable de- fects.												Total.
Aguadilla.....	Aguadilla, Aguada, Isabela, Lares, Moca, and San Sebastián.	262.58	105,052	3,844,043.53		708	708	530	121	25	674	32	1	1	285,840.95	109	998						
Arecibo.....	Arecibo, Barceloneta, Camuy, Ciales, Hatillo, Jayuya, Manatí, Morovis, Que- bradillas, and Utuado.	471.47	173,335	6,346.68	3	2,009	2,013	1,513	381	27	1,921	91	.....	2	213,300.55	432	2,108					
Caguas.....	Agua Buenas, Barranquitas, Barros, Ca- guas, Gurabo, Juncos, and San Lorenzo.	264.67	98,062	4,461.34		1,152	1,152	598	317	69	984	168	3	9	12	6,501.85	476	925					
Guayama.....	Albionito, Arroyo, Cayey, Cidra, Guayama, Patillas, and Salinas.	299.09	89,291	4,728.67		628	628	421	134	35	590	38	4	2	6	4,435.00	274	882					
Humacao.....	Celba, Culebra, Fajardo, Humacao, Lu- quillo, Maunabo, Naguabo, Las Piedras, Vieques, and Yabucoa.	327.18	96,862	4,445.33		638	638	493	75	29	597	41	1	2	3	5,185.40	266	614					
Mayaguez.....	Anasco, Hormigueros, Las Marias, Maya- guez, and Rincon.	157.74	74,157	5,745.88		1,144	1,144	809	210	54	1,073	71	.....	.....	.....	8,546.40	675	1,038		
Ponce.....	Adjuntas, Coamo, Guayanilla, Juana Díaz, Penuelas, Ponce, Santa Isabel, and Villalba.	469.74	155,988	6,400.00	26	1,970	1,995	1,841	13	30	1,884	27	85	1	.....	112,907.11	774	1,975				
San German.....	Cabo Rojo, Guanica, Lajas, Maricao, Sabana Grande, San German, and Yauco.	329.26	102,961	4,460.00		1,138	1,138	952	100	46	1,098	40	1	.....	1	8,467.15	1,467	209				
San Juan (sec. 1).....	Carolina, Loiza, Río Grande, Río Piedras, San Juan, and Trujillo Alto.	159.32	113,462	8,710.99	1	2,433	2,434	2,005	201	24	2,230	204	5	5	10	18,865.65	444	2,100					
San Juan (sec. 2).....	Bayamon, Comerío, Corozal, Dorado, Guay- nabo, Naranjito, Toa Alta, Toa Baja, Vega Alta, and Vega Baja.	272.80	107,312	4,450.00		899	899	612	150	3	765	94	.....	1	1	6,018.20	300	685				
Total.....			1,118,012	45,56,212.37	\$012,677	\$012,707	\$012,774	\$012,774	\$012,774	\$012,774	\$012,774	\$012,774	27	16	22	\$890,067.26	5,387	11,267					

In addition to the above personnel there is a clerk at large for registries of property at the annual salary of \$600. The amount expended by the registries of property for office supplies, stationery, etc., as per vouchers approved up to July 15, 1919, was \$2,666.50.

TABLE 21.—Registries of property, agricultural loans, fiscal year, 1918–19.

Registry of property of—	Documents presented during fiscal year 1918–19.	Documents registered.		Documents refused.	Documents with-drawn.	Amount of fees collected.
		Correct.	With defects.			
Aguadilla.....	38	33	3	.....	2	\$533.00
Arecibo.....	94	93	1	.....	.....	468.50
Caguas.....	215	78	84	2	51	582.00
Guayama.....	48	44	3	.....	1	162.00
Humacao.....	100	77	11	6	6	493.00
Mayaguez.....	60	55	.....	2	3	220.00
Ponce.....	76	75	.....	.....	1	448.50
San German.....	128	112	13	1	2	698.50
San Juan, section 1.....	25	21	.....	.....	4	204.00
San Juan, section 2.....	42	40	.....	.....	2	221.00
Total.....	826	628	115	11	72	4,030.50

TABLE 22.—Commercial registries, fiscal year, 1918–19.

Registry of property of—	Documents presented during fiscal year 1918–19.	Documents registered.	Documents with-drawn.	Total.	Amount of fees collected.
San Juan, section 2.....	145	136	9	145	\$1,206.86
Ponce.....	69	68	1	69	1,034.88
Total.....	214	204	10	214	2,241.74

TABLE 23A.—Cases in which reports were made by the attorney general upon applications for clemency during the fiscal year 1918–19, and those pending June 30, 1919.

MEN.

Pending cases June 30, 1918.....	3
Presented during fiscal year 1918–19.....	399
Total.....	402
Disposed of during fiscal year 1918–19:	
Pardon cases—	
Favorable recommendations:	
Full pardons.....	24
Conditional pardons.....	43
Adverse recommendations.....	67
No action for having served term.....	175
.....	9
Paroles—	251
Favorable recommendations.....	20
Adverse recommendations.....	38
Commutations—	67
Favorable recommendations.....	24
Adverse recommendations.....	22
Petitions for restoration of civil rights—	46
Favorable recommendations.....	8
Adverse recommendations.....	4
Remittance of costs—	12
Favorable recommendations.....	2
Adverse recommendations.....	0
Referred to juvenile courts.....	2
.....	15
Pending cases June 30, 1919.....	393
Total.....	9
	402

TABLE 23B.—*Prostitution cases in which reports were made by the attorney general upon applications for clemency during the fiscal year 1918-19, and those pending June 30, 1919.*

Presented during fiscal year 1918-19.....	245
Disposed of during fiscal year 1918-19:	
Conditional pardons—	
Favorable recommendations.....	31
Adverse recommendations.....	157
No action for having served term.....	3
No action because sentence was reversed.....	1
No action for having been sentenced by Federal court.....	1
Referred to the juvenile courts.....	2
Pending on June 30, 1919.....	0
Total.....	245

TABLE 24A.—*Civil cases in which the people of Porto Rico had an interest and in which there have been decisions during the fiscal year 1918-19.*

CIRCUIT COURT OF APPEALS FOR THE FIRST CIRCUIT.

Title of action.	Nature thereof.	Judgment.
H. H. Scoville et al. v. The Commissioner of Health.	Injunction to restrain sale of land and building for tuberculosis sanatorium.	For the government.
The People of Porto Rico v. American Railroad Co. of Porto Rico.	Action to restrain an increase in freight rates, etc.	Do.
Porto Rican American Tobacco Co. et al. v. Treasurer of Porto Rico.	Injunction to restrain enforcement of stamp guarantee law.	For petitioners.
West India & Panama Telegraph Co. et al. v. Public Service Commission.	Injunction to restrain enforcement of order of public service commission in re cable rates.	Do.
New York & Porto Rico Steamship Co. v. Workmen's Relief Commission.	Injunction to restrain enforcement of the workmen's compensation act.	For the government.

DISTRICT COURT OF THE UNITED STATES FOR PORTO RICO.

H. H. Scoville et al. v. Commissioner of Health.	Injunction to restrain sale of land and building for tuberculosis sanatorium.	For petitioner. (Reversed on appeal.)
Porto Rican American Tobacco Co. et al. v. Treasurer of Porto Rico.	Injunction to restrain enforcement of stamp guarantee law.	For petitioner. (Confirmed on appeal.)
West India & Panama Telegraph Co. et al. v. Public Service Commission.	Injunction to restrain enforcement of order of public service commission in re cable rates.	Do.
New York & Porto Rico Steamship Co. v. Workmen's Relief Commission.	Injunction to restrain enforcement of the workmen's compensation act.	For petitioners. (Reversed on appeal.)
Compañía de los Ferrocarriles v. Treasurer of Porto Rico.	Injunction to restrain collection of taxes.	For petitioners. (Appeal pending.)
Fortuna Estates v. Henna et al., and The People of Porto Rico, intervenor.	Injunction to restrain taking of irrigation waters.	Do.

SUPREME COURT OF PORTO RICO.

Fidel Arenas et al. v. The Commissioner of the Interior.	Injunction.....	For petitioners.
Federico Porrata Doria v. The People.	Recovery of money.....	For the government.
Fajardo Sugar Co. v. Treasurer of Porto Rico.	Recovery of taxes.....	Complaint sustained on demurrer.
James Bliss Coombs v. Treasurer of Porto Rico.	.....do.....	Do.
Central Machete v. Treasurer of Porto Rico.	.....do.....	Do.
H. & S. Behn v. Treasurer of Porto Rico.	.....do.....	Do.
Municipio de Quebradillas v. Executive Secretary.	Mandamus.....	For petitioner.
Sauri & Subirá v. Treasurer of Porto Rico.	Recovery of taxes.....	Complaint sustained on demurrer.
American Railroad Co. of Porto Rico v. Treasurer of Porto Rico.	.....do.....	Do.
The People of Porto Rico v. José D. Riera et al.	Action to recover real property.....	For defendant.
The People of Porto Rico v. Carlos H. Blondet.	Action to expropriate land.....	Dismissed by agreement.
Alejandro Franceschi, etc., v. Municipal Judge of Yauco.	Mandamus.....	Dismissed.

TABLE 244.—*Civil cases in which the people of Porto Rico had an interest and in which there have been decisions during the fiscal year 1918-19—Continued.*

DISTRICT COURTS OF PORTO RICO.

Title of action.	Nature thereof.	Judgment.
ARECIBO.		
The Fiscal of the District, in re Abintestato of Isaura Rodríguez Guerrero.	Judicial administration.....	For the government.
GUAYAMA.		
The People of Porto Rico v. Sucs. C. y J. Fantauzzi.	Action to expropriate land.....	Dismissal on motion of government.
The People of Porto Rico v. Cecilia Alcaído de McCormick et al.	.....do.....	For the government.
The People of Porto Rico v. Enriqueta Díaz de Calimano et al.	.....do.....	Do.
The People of Porto Rico v. Isidra Santos et al.	.....do.....	Do.
The People of Porto Rico v. Genaro Cañiño.	.....do.....	Do.
The People of Porto Rico v. José de Chondens.	.....do.....	Do.
The People of Porto Rico v. Elvira Porrata.	.....do.....	Do.
The People of Porto Rico v. Sucs. de C. y J. Fantauzzi.	.....do.....	Do.
HUMACAO.		
Diego Zalduendo Vove v. Treasurer of Porto Rico.	Recovery of taxes.....	Do.
Pilar Becerril v. Treasurer of Porto Rico.	.....do.....	Do.
James Biles Coombs et al. v. Treasurer of Porto Rico.	.....do.....	Do.
Fajardo Sugar Co. v. Treasurer of Porto Rico.	.....do.....	Do.
MATAGUEZ.		
The People of Porto Rico v. Oscar F. Bravo.	Recovery of taxes.....	Dismissed upon motion of government.
Do.	.....do.....	Do.
Felipe E. Laverne v. Insular Police Commission.	Mandamus.....	For the government. ¹
PONCE.		
The People of Porto Rico v. Juan Aquilino Gonzáles.	Action to recover real property, etc...	Do.
The People of Porto Rico v. Carmen Famarica Custagüini et al.	Action to expropriate land.....	Do.
The People of Porto Rico v. Manuel Rodríguez et al.	.....do.....	Do.
The People of Porto Rico v. The Santa Isabel Sugar Co. et al.	.....do.....	Do.
The People of Porto Rico v. Ramón Forga et al.	.....do.....	Do.
The People of Porto Rico v. Claudio Stñes Gonzáles.	.....do.....	Do.
The People of Porto Rico v. The Santa Isabel Sugar Co. et al.	.....do.....	Do.
SAN JUAN, SECTION 1.		
The People of Porto Rico v. Julio E. Iguina et al.	Nullity of proceedings.....	Dismissed.
The People of Porto Rico ex parte.....	Abintestate of Tomasa Gonzáles.....	Do.
The People of Porto Rico v. A. Antonini et al.	Appeal from a decision of the Irrigation commission.	For the government.
The People of Porto Rico v. Antonio P. Gonzáles et al.	.....do.....	Do.
The People of Porto Rico v. Eulalia S. de Barbosa et al.	.....do.....	Do.
The People of Porto Rico v. Patricio Alvarado et al.	.....do.....	Do.
The People of Porto Rico v. Andrés Cruz et al.	.....do.....	Do.
The People of Porto Rico v. Adolfo Anselmi et al.	.....do.....	Do.
The People of Porto Rico v. Logia Iris de Paz et al.	.....do.....	Do.
The People of Porto Rico v. Cristino Nuños et al.	.....do.....	Do.
The People of Porto Rico v. Pablo Antonetti et al.	.....do.....	Do.

¹ On appeal.

TABLE 24A.—*Civil cases in which the people of Porto Rico had an interest and in which there have been decisions during the fiscal year 1918-19—Continued.*

DISTRICT COURTS OF PORTO RICO—Continued.

Title of action.	Nature thereof.	Judgment.
SAN JUAN, SECTION 1—contd.		
The People of Porto Rico v. Domingo Covas et al.	Appeal from a decision of the irrigation commission.	For the government.
The People of Porto Rico v. Jorge Torros et al.	do.	Do.
The People of Porto Rico v. Fernando Vendrell et al.	do.	Do.
The People of Porto Rico v. Enriqueta Calimano et al.	do.	Do.
The People of Porto Rico v. Suc. G. y J. Fantauzzi et al.	do.	Do. ¹
Do.	do.	Do. ¹
Do.	do.	For defendants. ¹
The People of Porto Rico v. Maria Franceschi et al.	do.	For the government.
The People of Porto Rico v. A. Hartman et al.	do.	Do.
Do.	do.	For defendant. (On appeal.)
The People of Porto Rico v. Chas. L. Crehore et al.	do.	For the government.
The People of Porto Rico v. Irrigation Commission.	do.	Do.
Do.	do.	Do.
Do.	do.	Do.
Do.	do.	Do.
The Porto Rico Coal Co. v. The Treasurer of Porto Rico.	Recovery of taxes.	For plaintiff. (Appeal pending.)
Fernando A. Vendrell v. Irrigation Commission et al.	Appeal from a decision of the irrigation commission.	For the government. (Appeal pending.)
Charles L. Crehore v. Treasurer of Porto Rico.	Recovery of taxes.	Assessment modified.
The People of Porto Rico v. Sucn. R. Valdés et al.	Action to recover real property.	For the government. (Appeal pending.)
Sucn. C. & J. Fantauzzi v. Treasurer of Porto Rico.	Recovery of taxes.	Assessment modified.
Do.	do.	Dismissed.
Do.	do.	Do.
Do.	do.	Assessment modified.
Do.	do.	Do.
H. & S. Behn v. Treasurer of Porto Rico.	do.	Do.
Do.	do.	Do.
Charles L. Crehore v. Treasurer of Porto Rico.	do.	Do.
Do.	do.	Do.
Do.	do.	Do.
The People of Porto Rico v. Celestino López Pérez.	Injunction.	For the government. ¹
Ex parte American Railroad Co. of Porto Rico.	Appeal from a decision of the public service commission.	Dismissed.
Ex parte Peter Merry.	Appeal from a decision of the workmen's relief commission.	Do.
The People of Porto Rico v. Dionisio de Jesús.	Unlawful detainer.	For the government.
The People of Porto Rico v. Joaquín Padín.	do.	Do.
The People of Porto Rico v. Mateo García.	do.	Do.
The People of Porto Rico v. Juan Bonilla.	do.	Do.
The People of Porto Rico v. Luis Pizarro.	do.	Do.
The People of Porto Rico v. Antonio Patiño.	do.	Dismissed.
The People of Porto Rico v. Rosenda M. de López.	do.	For the government.
Felipe Lavergne v. Insular Police Commission.	Mandamus.	Do.
SAN JUAN, SECTION 2.		
The People of Porto Rico v. W. D. Noble et al.	Action to recover on bail bond.	Do.

¹ On appeal.

TABLE 24A.—Civil cases in which the people of Porto Rico had an interest and in which there have been decisions during the fiscal year 1918-19—Continued.**MUNICIPAL COURTS.**

Title of action.	Nature thereof.	Judgment.
SAN JUAN.		
The Domestic and Foreign Missions of the Protestant Episcopal Church v. Treasurer of Porto Rico.	Recovery of taxes.....	Dismissed.
SAN GERMAN.		
Galo Balzac Paria v. Treasurer of Porto Rico.	.....do.....	Do.
SALINAS.		
The People of Porto Rico v. Luis Colon Delfó et al.	Recovery of money.....	Dismissed upon motion of government.

TABLE 24B.—Civil cases in which the People of Porto Rico has an interest still in litigation at the close of the fiscal year 1918-19.**CIRCUIT COURT OF APPEALS FOR THE FIRST CIRCUIT.**

Title of action.	Nature thereof.	Commenced.	Status.
Compañía de los Ferrocarriles de Puerto Rico v. Treasurer of Porto Rico.	Injunction to restrain collection of taxes.	Feb. 6, 1918	Pending.
Fortuna Estates v. Henna et al. and The People of Porto Rico, intervenor.	Injunction to restrain taking of irrigation water.	Feb. 12, 1919	Do.

DISTRICT COURT OF THE UNITED STATES FOR PORTO RICO.

American Railroad Co. of Porto Rico v. Workmen's Relief Commission.	Injunction to restrain enforcement of the workmen's compensation act.	Feb. 17, 1919	Pending.
Porto Rico Railway Light and Power Co. v. Workmen's Relief Commission.	.....do.....	Mar. 28, 1919	Do.
H. H. Scoville et al. v. The Commissioner of Health et al.	Injunction to restrain sale of land and building for tuberculosis sanatorium.	May 28, 1918	Pending of collection of costs.
The People of Porto Rico v. Fortuna Estates.	Action to recover land.....	May 19, 1917	Pending.
The People of Porto Rico v. Fortuna Estates and Russel & Co.	Injunction to restrain waste...	Aug. 22, 1918	Do.

SUPREME COURT OF PORTO RICO.

Felipe E. Lavergne v. Insular Police Commission.	Mandamus.....	Feb. 4, 1919	Pending decision.
The People of Porto Rico v. Sucs. C. y J. Fantauzzi.	Appeal from a decision of the Irrigation Commission.	May 27, 1919	Pending hearing.
Do.....	.....do.....	.....do.....	Do.
Do.....	.....do.....	.....do.....	Do.
The People of Porto Rico v. A. Hartmann & Co.	.....do.....	May 29, 1919	Do.
The People of Porto Rico v. Fernando A. Vendrell.	.....do.....	June 25, 1919	Pending to file briefs.
The People of Porto Rico v. Pedro A. Zamorano.	Action to recover land.....	June 28, 1919	Do.

DISTRICT COURTS OF PORTO RICO.

ARECIBO.			
The People of Porto Rico v. Suen. Tomás Boneta Balet.	Recovery of land.....	June 12, 1916	Pending hearing.

TABLE 24B.—*Civil cases in which the people of Porto Rico had an interest still in litigation at the close of the fiscal year 1918-19—Continued.*

DISTRICT COURTS OF PORTO RICO—Continued.

Title of action.	Nature thereof.	Commenced.	Status.
GUAYAMA.			
A. Hartman & Co. v. Treasurer of Porto Rico.	Recovery of taxes.....	Nov. 26, 1917	Pending hearing.
The People of Porto Rico v. A. Hartman & Co.	Action to expropriate land....	Jan. 14, 1919	Pending decision.
Do.....	do.....	Feb. 13, 1919	Do.
Do.....	do.....	do.....	Do.
The People of Porto Rico v. José Brenes Larroche.	do.....	Mar. 21, 1919	Pending answer.
The People of Porto Rico v. María C. Vives et al.	do.....	June 17, 1919	Pending to serve summons.
The People of Porto Rico v. A. Hartman & Co.	do.....	do.....	Do.
Junta Escolar de Patillas v. Sue. Cervoni Massari.	do.....	Mar. 23, 1918	Pending to file amendment complaint.
PONCE.			
The People of Porto Rico v. Juan Martínez Domínguez.	Establishment of Dominion title.	June 23, 1916	Pending hearing.
The People of Porto Rico v. Suon. Ramón del Toroseda.	Action to recover real property	July 15, 1916	Pending answer to amendment complaint.
The People of Porto Rico v. Eleuteria Rivera Irizarri et al.	Action to cancel certain records in the registry of property.	Dec. 30, 1916	Pending hearing.
The People of Porto Rico v. Hector Santé.	Action to expropriate land....	Nov. 23, 1917	Pending.
The People of Porto Rico v. Micaela Martínez Ortiz.	do.....	do.....	Pending decision on defendant's demurrer.
The People of Porto Rico v. Fernando A. Vendrell.	do.....	Dec. 1, 1917	Pending to serve summons.
The People of Porto Rico v. Hector Santé.	do.....	May 29, 1918	Do.
Sauri & Subirá v. Treasurer of Porto Rico.	Recovery of taxes.....	Sept. 30, 1916	Pending hearing.
Bernardo Marle v. The People of Porto Rico.	Action to recover real property	Apr. 8, 1918	Pending answer.
Sauri & Subirá v. Treasurer of Porto Rico.	Recovery of taxes.....	May 3, 1917	Pending hearing.
The People of Porto Rico v. Manuel Ponte Cintrón.	Action to expropriate land....	Jan. 3, 1919	Pending answer.
The People of Porto Rico v. Leopoldo Tormes et. al.	Forfeiture of bail.....	Mar. 25, 1919	Pending hearing on defendant's demurrer.
The People of Porto Rico v. Juan Félix Olivieri et al.	Action to expropriate land....	May 20, 1919	Pending answer.
SAN JUAN, SECTION 1.			
The People of Porto Rico v. Sobrinos de Ezquiaga.	Recovery of money.....	Jan. 31, 1916	Pending hearing.
The People of Porto Rico v. W. B. Noble et al.	do.....	May 12, 1918	Do.
A. Blanco Fernández v. Treasurer of Porto Rico.	Injunction.....	Dec. 21, 1918	Do.
The People of Porto Rico v. Aniceto Miranda.	Action to recover real property	Dec. 23, 1911	Do.
Ensenada Estates v. Treasurer of Porto Rico.	Recovery of taxes.....	May 26, 1914	Do.
Do.....	do.....	Sept. 29, 1915	Do.
Do.....	do.....	do.....	Do.
Fortuna Estates v. Treasurer of Porto Rico.	do.....	do.....	Do.
Do.....	do.....	May 21, 1916	Do.
Do.....	do.....	Sept. 28, 1916	Do.
Do.....	do.....	Nov. 21, 1917	Do.
Central Machete v. Treasurer of Porto Rico.	do.....	Apr. 20, 1916	Do.
Do.....	do.....	Sept. 25, 1915	Do.
Do.....	do.....	Apr. 20, 1916	Do.
Porto Rico Telephone Co. v. Treasurer of Porto Rico.	do.....	Mar. 29, 1916	Pending decision motion to dismiss.
B. Fernández & Co. v. Treasurer of Porto Rico.	do.....	Aug. 1, 1917	Pending hearing.
American Railroad Co. of Porto Rico v. Treasurer of Porto Rico.	do.....	Sept. 24, 1917	Do.
Central Aguirre v. Treasurer of Porto Rico.	do.....	May 7, 1918	Do.
Do.....	do.....	Sept. 27, 1917	Do.
Do.....	do.....	Jan. 2, 1918	Do.
Do.....	do.....	Nov. 24, 1918	Do.

TABLE 24B—*Civil cases in which the People of Porto Rico had an interest still in litigation at the close of the fiscal year 1918-19.*

DISTRICT COURT OF PORTO RICO—Continued.

Title of action.	Nature thereof.	Commenced.	Status.
SAN JUAN, SECTION 1—contd.			
James Bliss Coombe et al. v. Treasurer of Porto Rico.	Recovery of taxes.....	Sept. 29, 1917	Pending hearing.
West India Oil Co. v. Treasurer of Porto Rico.	.....do.....	.....do.....	Do.
South Porto Rico Sugar Co. v. Treasurer of Porto Rico.	.....do.....	.....do.....	Do.
Do.....	.....do.....	Jan. 17, 1918	Do.
Do.....	.....do.....	Feb. 24, 1919	Do.
Do.....	.....do.....	Mar. 27, 1919	Do.
Russell & Co. v. Treasurer of Porto Rico.	.....do.....	Sept. 29, 1917	Do.
Do.....	.....do.....	June 7, 1918	Pending hearing on defendant's demurrer.
Do.....	.....do.....	Feb. 20, 1919	Do.
Do.....	.....do.....	Mar. 27, 1919	Do.
The Fajardo Sugar Co. v. Treasurer of Porto Rico.	.....do.....	Oct. 8, 1917	Pending hearing.
Do.....	.....do.....	June 11, 1918	Pending hearing on defendant's demurrer.
Freiria & Co. v. Treasurer of Porto Rico.	.....do.....	Mar. 1, 1918	Pending hearing of motion to dismiss.
Arecibo Grape Fruit Co. v. Treasurer of Porto Rico.	.....do.....	June 17, 1919	Pending hearing.
Russell & Co., ex parte.....	Appeal from a decision of the irrigation commission.	Sept. 28, 1918	Pending.
The People of Porto Rico v. Suces. de L. Villamil	Recovery of money.....	Nov. 9, 1917	Pending hearing on motion to strike.
The People of Porto Rico v. Isaac Sachs.	.....do.....	Mar. 5, 1918	Pending hearing.
José Salgado Jiménez v. The People of Porto Rico.	Damages.....	Apr. 14, 1918	Pending hearing on defendant's demurrer.
The People of Porto Rico v. La O Díez et al.	Recovery of money.....	Aug. 7, 1918	Do.
Ex parte, Asociación de Productores de Azúcar de Puerto Rico.	Appeal from a decision of the public service commission.	Apr. 3, 1919	Pending.
Sucerie Central Colose v. People of Porto Rico.	Recovery of money.....	May 19, 1919	Pending hearing on defendant's demurrer.
SAN JUAN, SECTION 2.			
The People of Porto Rico v. Sobrinos de Ezquiaga.	Action to compel forfeiture of distillery bond.	July 9, 1917	Pending decision.
La Asociación de Plomeros de Puerto Rico v. Commissioner of Health.	Injunction.....	May 28, 1919	Pending hearing.
ARECIBO.			
The People of Porto Rico v. Vicenta Flores.	Recovery of money.....	Nov. 12, 1918	Pending.
The People of Porto Rico v. Victoriano Valencia.	.....do.....	.....do.....	Do.
The People of Porto Rico v. Celestino Tejada.	.....do.....	.....do.....	Do.
The People of Porto Rico v. Casildo Polanco.	.....do.....	.....do.....	Do. ¹
The People of Porto Rico v. Eleuteria Feliciano.	.....do.....	.....do.....	Do. ¹
The People of Porto Rico v. Sixto Cottés.	.....do.....	.....do.....	Do. ¹
Do.....	.....do.....	.....do.....	Do.
The People of Porto Rico v. Flora Ortiz.	.....do.....	.....do.....	Do.
The People of Porto Rico v. Manuel Fardo.	.....do.....	.....do.....	Do.
The People of Porto Rico v. Saturnino Pagan.	.....do.....	.....do.....	Do.
The People of Porto Rico v. José Oliveras.	.....do.....	.....do.....	Do. ¹
The People of Porto Rico v. Jacinta Ocasio.	.....do.....	.....do.....	Do.
The People of Porto Rico v. Margarita Arce.	.....do.....	.....do.....	Do. ¹
The People of Porto Rico v. Antonia Acosta.	.....do.....	.....do.....	Do. ¹

¹ Clerk of the court reports that these cases should be dismissed because of payment by defendants.

TABLE 24B—*Civil cases in which the People of Porto Rico had an interest still in litigation at the close of the fiscal year 1918-19.*

DISTRICT COURT OF PORTO RICO—Continued.

Title of action.	Nature thereof.	Commenced.	Status.
ARECIBO—continued.			
The People of Porto Rico v. Zaragoza Correa.	Recovery of money.....	Nov. 12, 1918	Pending.
Do.....	do.....	do.....	Do.
The People of Porto Rico v. Teresa Figueroa.	do.....	do.....	Do. ¹
The People of Porto Rico v. Jesús Feliciano.	do.....	do.....	Do.
The People of Porto Rico v. Adolfo Díaz.	do.....	do.....	Do.
The People of Porto Rico v. Francisco Soto.	do.....	do.....	Do.
The People of Porto Rico v. Altagracia Sosa.	do.....	do.....	Do.
The People of Porto Rico v. Fabián Soriano.	do.....	do.....	Do.
The People of Porto Rico v. Victoria Valentín.	do.....	do.....	Do.
The People of Porto Rico v. Inés Vega.	do.....	do.....	Do. ¹
The People of Porto Rico v. Josefa García.	do.....	do.....	Do.
The People of Porto Rico v. Ana Hernández.	do.....	do.....	Do.
The People of Porto Rico v. Gabriel Herrera.	do.....	do.....	Do.
The People of Porto Rico v. Juana Batista.	do.....	do.....	Do.
The People of Porto Rico v. Eustasia de Jesús.	do.....	do.....	Do.
The People of Porto Rico v. Daría Batista.	do.....	do.....	Do.
The People of Porto Rico v. Federico Cardona.	do.....	do.....	Do.
The People of Porto Rico v. Cecilia Colón.	do.....	do.....	Do. ¹
The People of Porto Rico v. José Rodríguez.	do.....	do.....	Do.
Do.....	do.....	do.....	Do.
The People of Porto Rico v. Cecilia Rodríguez.	do.....	do.....	Do. ¹
The People of Porto Rico v. Sandallo Robles.	do.....	do.....	Do. ¹
The People of Porto Rico v. Providencia Rodríguez.	do.....	do.....	Do.
The People of Porto Rico v. María Rodríguez de Jesús.	do.....	do.....	Do.
The People of Porto Rico v. Isabel Cruz.	do.....	do.....	Do.
The People of Porto Rico v. Andrés Maldonado.	do.....	do.....	Do.
The People of Porto Rico v. Pedro Vilella.	do.....	do.....	Do.
The People of Porto Rico v. Aquilino Viera.	do.....	do.....	Do. ¹
The People of Porto Rico v. Antonio Delgado.	do.....	do.....	Do.
FAJARDO.			
The Fajardo Sugar Growers' Association v. Municipal Treasurer of Fajardo.	Recovery of taxes.....	Aug. 13, 1917	Pending hearing on defendant's demurrer.
Do.....	do.....	Aug. 11, 1917	Pending.
LARES.			
The People of Porto Rico v. Luis F. Díaz Llonza et al.	Forfeiture of bail.....	Apr. 29, 1915	Pending decision. ²
YABUCOA.			
The People of Porto Rico v. Emilio Colón y Gregorio Berrios	Recovery of money.....	July 7, 1915	Pending decision on Defendant Colón's demurrer.

¹ Clerk of the court reports that this case should be dismissed because of payment by defendants.² Clerk of the court reports that defendants paid amounts of bail and costs.

TABLE 25-A.—Statement showing the number of prisoners in the penal institutions and inmates in the reform school, fiscal year 1918-19.

MEN.

Prisoners.	Penitentiary.	San Juan jail.	Arecibo jail.	Agua-dilla jail.	Mayaguez jail.	Ponce jail.	Gua-yama jail.	Huma-cao jail.	Re-form school.	Total.
Prisoners confined on June 30, 1918.....	465	189	94	62	76	75	70	122	196	1,349
Prisoners entered during the fiscal year 1918-19.....	170	1,765	696	468	627	678	515	448	159	5,528
Total.....	635	1,954	792	530	703	753	585	570	355	6,877
Prisoners discharged during fiscal year 1918-19.....	281	1,719	748	482	636	657	496	502	153	5,676
Prisoners confined on June 30, 1919.....	354	235	44	48	67	96	87	68	202	1,201

WOMEN.

Prisoners confined on June 30, 1918.....	7	16	1	.....	3	1	9	.....	37
Prisoners entered during the fiscal year 1918-19.....	190	320	.....	92	352	22	11	.....	987
Total.....	197	336	1	92	355	23	20	.....	1,024
Prisoners discharged during fiscal year 1918-19.....	193	249	1	92	355	19	20	.....	929
Prisoners confined on June 30, 1919.....	4	87	.....	.....	.....	4	.....	.....	95

TABLE 25-B.—Statement showing the number of sick prisoners in the penal institutions and inmates in the reform school, fiscal year 1918-19.

Prisoners.	Penitentiary.	San Juan jail.	Arecibo jail.	Agua-dilla jail.	Mayaguez jail.	Ponce jail.	Gua-yama jail.	Huma-cao jail.	Re-form school.	Total.
Sick prisoners on June 30, 1918 ¹	65	15	23	4	3	4	3	7	1	125
Sick during the fiscal year 1918-19 ²	486	835	566	92	147	288	207	108	402	3,126
Total.....	551	850	589	96	150	292	210	110	408	3,251
Sick cured during fiscal year 1918-19.....	492	796	566	92	139	286	197	101	379	3,048
Balance.....	59	54	23	4	11	6	13	9	24	203
Deaths during the fiscal year 1918-19.....	27	26	9	1	.....	6	8	4	22	* 108
Sick prisoners on June 30, 1919.....	32	28	14	3	11	.....	5	5	2	100

¹ Some of these figures do not agree with those given in the last year's report on account of clerical mistakes in the figures of said year.

² These figures are greatly increased over last year's figures because of the large number of women prostitutes confined in four of the district jails in connection with the war activities of the department of justice. Most of these women were suffering from venereal and other diseases. They are also increased by reason of the epidemic of influenza which affected the penitentiary, the reform school, and some of the district jails.

* Three more prisoners died outside of the penal institutions.

TABLE 26-A.—Statement showing terms of sentence of prisoners confined in the penal institutions and inmates in the reform school, on June 30, 1919.

Prisoners.	Penitentiary.	San Juan jail.	Arecibo jail.	Agua-dilla jail.	Mayaguez jail.	Ponce jail.	Guayama jail.	Humacao jail.	Reform school.	Total.
Awaiting trial.....		32	13	8	10	26	8	3	31	123
Sentenced.....	354	207	118	40	57	68	83	65	181	1,173
Total.....	354	239	131	48	67	96	91	68	202	1,296
Delinquent minors.....									175	175
Minor girls.....			11							11
Sentenced to serve until 21 years of age.....									5	5
Up to 6 months.....	10	120	44	32	44	53	48	29		380
Over 6 months and less than 1 year.....	4	22	2	2	1	5	10	1		47
1 year and less than 2.....	49	51	39	6	10	8	21	26		210
2 years and less than 3.....	18	14	15		2	2	4	5	1	61
3 years and less than 4.....	34							1		35
4 years and less than 5.....	2		1					1		4
5 years and less than 6.....	40		3					1		44
6 years and less than 8.....	32									32
8 years and less than 10.....	29									29
10 years and less than 15.....	72		2							74
15 years and less than 20.....	6		1					1		8
20 years and less than 30.....	19									19
30 years and over.....	4									4
Lifetime.....	33									33
Condemned to death.....	2									2
Total.....	354	207	118	40	57	68	83	65	181	1,173

TABLE 26 B.—Number of commitments of prisoners in the penal institutions and inmates in the reform school on June 30, 1919.

Expression.	Penitentiary.	District jails.	Reform school.	Total.
Confined for the				
First time.....	260	436	136	832
Second time.....	33	124	66	223
Third time.....	24	62		86
Fourth time.....	11	33		44
Fifth time.....	11	17		28
Sixth time.....	5	21		26
Seventh time.....	3	3		6
Eighth time.....	2	10		12
Ninth time.....	3	7		10
Tenth time.....	1	6		7
Eleventh time.....	1	4		5
Twelfth time.....		5		5
Thirteenth time.....		1		1
Fourteenth time.....		1		1
Fifteenth time.....		2		2
Sixteenth time and upward.....		8		8
Total.....	354	740	202	1,296

TABLE 27.—*Classification, by age, of number of prisoners in the penal institutions and inmates in the reform school, on June 30, 1919.*

Expression.	Peniten- tial.	District jails.	Reform school.	Total.
Up to 10 years.....		1		1
11 years and under 16.....	1	22	159	182
16 years and under 21 years.....	55	214	43	312
21 years and under 25 years.....	104	192		296
25 years and under 30 years.....	82	132		214
30 years and under 35 years.....	41	71		112
35 years and under 40 years.....	28	54		82
40 years and under 45 years.....	24	24		48
45 years and under 50 years.....	7	15		22
50 years and under 55 years.....	4	3		7
55 years and under 60 years.....	3	8		11
60 years and under 65 years.....	4	3		7
65 years and under 70 years.....		1		1
70 years and under 75 years.....				
75 years and under 80 years.....	1			1
80 years and upward.....				
Total.....	354	740	202	1,296

TABLE 28.—*Grand total of prisoners on June 30, 1919.*

Expression.	Peni- ten- tial.	San Juan jail.	Are- cibo jail.	Agua- dilla jail.	Maya- guez jail.	Ponce jail.	Gua- yama jail.	Huma- cao jail.	Re- form school.	Total.
Men:										
Confined in the penal in- stitutions and reform school.....	354	235	44	48	67	96	87	68	202	1,201
Paroled.....	61									61
Fugitives ¹	41	41	2	13	10	28	18	20	9	182
Total.....	456	276	46	61	77	124	105	88	211	1,444
Women:										
Confined in the penal in- stitutions.....		4	87				4			95
Grand total.....	456	280	133	61	77	124	109	88	211	1,539

¹ Under this item is included the total number of prisoners who have escaped and who have not been recaptured since statistics have been kept. They are still considered as fugitives because they never have completed their sentences, although it is probable that many of them have died.

TABLE 29.—*Classification by nationality of prisoners confined in the penal institutions and inmates in the reform school on June 30, 1919.*

Expression.	Peniten- tial.	District jails.	Reform school.	Total.
Natives of the United States of America.....		1		1
Natives of Porto Rico.....	353	736	199	1,288
Natives of Virgin Islands, U. S. A.....			3	3
Spaniards.....		1		1
South Americans.....	1			1
Cubans.....		1		1
Arabians.....		1		1
Total.....	354	740	202	1,296

TABLE 30.—*Different classifications of prisoners confined in the penal institutions and inmates in the reform school on June 30, 1919.*

Expression.	Peniten- tiary.	District jails.	Reform school.	Total.
Sex:				
Male.....	354	645	202	1,201
Female.....		95		95
Conjugal relations:				
Single.....	226	582	202	1,010
Married.....	116	140		256
Widowed.....	12	18		30
Color:				
White.....	165	300	94	559
Mulatto.....	123	202	83	408
Negro.....	66	58	25	149
Education:				
Know how to read.....	9	37		46
Know how to read and write.....	126	242	97	465
Do not know how to read and write.....	219	461	105	785
Attended secondary schools.....	2	8		10
Attended common schools.....	124	229	121	474
No education.....	228	503	81	812
Religious preference:				
Catholics.....	250	377	156	783
Protestants.....	36	37	23	96
Spiritualists.....	36	75	5	116
Credless.....	32	251	18	301
Habits:				
Used liquors.....	158	346	26	530
Did not use liquors.....	196	394	176	766
Used tobacco.....	270	579	83	932
Did not use tobacco.....	84	161	119	364
Employed or idle:				
Employed when crime was committed.....	253	428	11	692
Idle when crime was committed.....	101	312	191	604
Behavior in the penal institution:				
Good.....	266	609	88	963
Fair.....	27	85	98	210
Bad.....	61	46	16	123
Physical condition on commitment:				
Good health.....	333	611	193	1,137
Sick.....	21	129	9	159
Total number of prisoners.....	354	740	202	1,296

TABLE 31.—*Statement showing occupations of prisoners when confined in the penal institutions and inmates in the reform school on June 30, 1919.*

Occupation.	Peniten- tiary.	District jails.	Reform school.	Total.
Artists.....	1			1
Barbers.....	9	8		17
Bakers.....	15	9	2	26
Butchers.....	4			4
Blacksmiths.....	6	6		12
Bootblack.....		4		4
Cigar makers.....	20	18	1	39
Carpenters.....	4	16	1	21
Coach drivers.....		3		3
Cooks.....	2	3		5
Chauffeurs.....	6	8	1	15
Domestic employees.....	4	107	9	120
Employees.....	7	22	3	32
Electricians.....	1	2		3
Laborers.....	192	405		597
Merchants.....	2	5		7
Masons.....	8	2		10
Mechanicians.....	2			2
Motormen.....	1			1
Property owners.....	1	4		5
Planters.....	11	27		38
Printers.....	1			1
Painters.....	3	14		17
Plumbers.....	2	5		7
Professional.....		1		1
Saddlers.....		1		1
Servants.....		2		2
Shirt maker.....	1	1		2
Soldiers.....	4	2		6
Shoemakers.....	12	10		22
Sailors.....	4	12		16
Tradesmen.....	24	30		54
Tailors.....	1	6		7
Tinsmiths.....	1		1	2
Without occupation.....	5	6	184	195
Total.....	354	740	202	1,296

TABLE 32.—*Summary of offenses of prisoners confined on June 30, 1919.*

	Number of offenses.	Percentage of total number of offenses.	Rate per thousand on island's population.
Larceny (grand, 39; petit, 280).....	319	24.61	0.2853
Delinquent minors.....	202	15.58	.1807
Burglary.....	159	12.27	.1422
Assault and battery.....	120	9.26	.1073
Murder.....	101	7.79	.0903
Keeping houses of ill fame and prostitution.....	44	3.40	.0394
Rape.....	39	3.01	.0349
Homicide.....	38	2.93	.0339
Breach of public peace.....	36	2.78	.0322
Attempt to kill.....	19	1.47	.0169
Embezzlement.....	18	1.39	.0161
False impersonation and imposture.....	18	1.39	.0161
Mayhem.....	17	1.31	.0152
Violation of internal-revenue laws.....	13	1.00	.0116
Incest.....	11	.85	.0098
Minor girls.....	11	.85	.0098
Extortion.....	10	.77	.0089
Robbery.....	9	.69	.0080
Against the public safety.....	8	.62	.0072
Violation of Federal acts, United States of America.....	8	.62	.0072
Gambling.....	8	.62	.0072
Adultery.....	7	.54	.0062
Attempt to commit rape.....	7	.54	.0062
Forgery.....	6	.46	.0053
Concealed weapons.....	6	.46	.0053
Against the executive power.....	5	.39	.0044
Abandonment and desertion of minors.....	4	.31	.0035
Against nature.....	4	.31	.0035
Arson.....	4	.31	.0035
Attempt to commit burglary.....	4	.31	.0035
Conspiracy.....	3	.23	.0026
Against the public health.....	3	.23	.0026
Against the public justice.....	3	.23	.0026
Attempt to commit homicide.....	3	.23	.0026
Bigamy.....	2	.15	.0017
Against the public morals.....	2	.15	.0017
Parricide.....	2	.15	.0017
Attempt to commit felony.....	2	.15	.0017
Other offenses.....	21	1.62	.0188
Total.....	1,296		

TABLE 33.—*Classification of prisoners in the penal institutions and inmates in the reform school, by judicial districts, on June 30, 1919, and percentage in relation to the total population of Porto Rico.*

	Penitentiary.	District jails.	Reform school.	Total.	Percentage.	Population.
Judicial district of—						
Aguadilla.....	38	79	20	137	0.1225	136,780
Arecibo.....	41	108	14	163	.1458	173,335
Guayama.....	56	62	12	130	.1163	153,344
Humacao.....	70	74	14	158	.1413	124,332
Layaguez.....	35	87	22	144	.1288	113,886
Ponce.....	46	135	54	235	.2101	195,561
San Juan.....	63	195	65	323	.2889	220,774
Martial court at Camp "Las Casas".....	1			1	.0000	
United States District Court.....	4		1	5	.0000	
Total.....	354	740	202	1,296	1.1537	1,118,012

TABLE 34.—Principal offenses for which prisoners have been sentenced, by calendar year, on and after 1887.

Years.	Against person.				Against property.				Against morals.		
	Murder.	Homicide.	Attempt to kill.	Total.	Arson.	Robbery.	Burglary.	Total.	Rape.	Seduction.	Total.
1887	1	21	5	27	3	68		71	8		8
1888		19	9	28		18		18			
1889		20	12	32		3		3			
1890	1	31	3	35		28		28	1		1
1891	2	40	5	47	4	122		126	6		6
1892		36		36	9	65		70	4		4
1893		32	2	34	1	65		67	5		5
1894		33	4	37		109		109	4		4
1895		16	4	20	2	113		115	4		4
1896	2	22	4	28		88		88			
1897	3	34	6	43	2	48		50			
1898	2	22	1	25		8		8			
1899	5	21	6	32	8	74		82			1
1900	8	28	17	53	3	117		120	3		3
1901	3	25	13	41	3	79		82	5		5
1902	5	21	7	33	2	50	5	57	7	5	12
1903	9	30	7	46	3	14	22	49	7	3	10
1904	9	25	3	37	1	8	20	29	9	7	16
1905	25	15	14	54		2	58	60	20	17	37
1906	16	21	15	52		1	82	83	16	13	29
1907	9	19	19	47		3	90	93	18	9	27
1908	9	20	6	35	1	4	96	101	11	9	20
1909	5	17	15	37	4	4	129	137	6	12	18
1910	12	48	6	66	2	2	141	145	10	3	13
1911	17	22	12	51	2		32	34	6	2	8
1912	10	33	5	48	2	1	69	72	9	2	11
1913	8	21	5	34		1	74	75	4	1	5
1914	12	15	10	37			43	43	11	3	14
1915	6	22	5	33	1		72	73	16	1	17
1916	25	45	10	80	2		121	123	9	2	11
1917	17	16	10	43	2		56	58	8	3	11
1918	14	12	19	45		7	67	74	6	2	8
1919 ¹	15	4	8	27	1	1	8	10	4	4	8

¹ From Jan. 1 to June 30.

TABLE 35.—Average number of prisoners in the penal institutions and inmates in the reform school.

Years.	Penitentiary.	San Juan jail.	Arecibo jail. ¹	Agua-di la jail.	Mayaguez jail.	Ponce jail.	Guayama jail.	Hu-macao jail.	Re-form school.	Total.
Daily average number of prisoners:										
1906-06	591	507		77	105	209	118	158		1,855
1906-07	668	368		61	105	215	130	146		1,633
1907-08	646	355		50	137	181	105	192	26	1,632
1908-09	559	360		67	117	199	104	204	44	1,634
1909-10	530	379		73	122	175	99	213	71	1,562
1910-11	546	336		49	96	270	112	143	89	1,641
1911-12	501	354		43	110	309	128	138	98	1,681
1912-13	486	336		53	102	162	158	133	96	1,526
1913-14	437	350		85	122	151	132	168	100	1,545
1914-15	413	351		78	113	159	95	180	98	1,487
1915-16	481	375		65	129	163	83	163	100	1,559
1916-17	463	341		72	75	147	91	144	100	1,433
1917-18	456	206	111.50	63.34	75.55	101.84	95.32	143	156.81	1,468.38
1918-19	411	318	238	44	59	284	88	97	194	1,732
Daily average number of sick prisoners on special rations:										
1906-06	76	27		3	11	18	3	20		158
1906-07	73	10		1	2	14	4	17		121
1907-08	70	13		1	10	17	9	17	2	135
1908-09	58	11		1	13	16	8	10	1	118
1909-10	54	9		1	4	15	4	10	3	106
1910-11	50	13		2	4	13	4	5	3	94
1911-12	70	21		2	6	10	5	7	5	124
1912-13	74	22		1	6	7	8	7	5	131
1913-14	70	30		1	11	4	7	7	2	132
1914-15	63	29		1	9	6	6	10	2	126
1915-16	76	30		5	3	6	6	14	2	142
1916-17	60	30.39		4.41	.65	7.29	10.60	13.46	1.18	127.8
1917-18	59.98	18.25	8.72	3.14	1.25	1.49	6.55	9.33	1.29	110
1918-19	40	64	20	4	.51	86	5	5	5	228.5

¹ No figures are given for the Arecibo jail up to the fiscal year 1916-17, since the San Juan and Arecibo jails were running as a single jail until June 30, 1917.

TABLE 36.—*Cities of Porto Rico in which crimes were committed by the prisoners confined in the penal institutions and inmates in the reform school on June 30, 1919.*

Municipality.	Peniten- tiary.	District jails.	Reform school.	Total.
Adjuntas.....	1	19	1	21
Aguada.....	3	6	1	10
Aguadilla.....	13	35	12	60
Agua8 Buenas.....	1	3		4
Albonito.....	2			2
Anasco.....	2	19	4	25
Arecibo.....	12	46	9	67
Arroyo.....	7	5	2	14
Barceloneta.....	1	4		5
Barranquitas.....				
Barros.....	1	2	2	5
Bayamon.....	11	26	3	40
Cabo Rojo.....	4	11	1	16
Caguas.....	11	19	5	35
Camuy.....	6	11		17
Carolina.....	4	8		12
Cavey.....	11	12	4	27
Celba.....	1			1
Ciales.....	3	11	1	15
Cidra.....	1	2		3
Coamo.....	3	1	1	5
Comerio.....	2	1	5	8
Corozal.....	1			1
Culebras.....	1	1		2
Dorado.....	2			2
Fajardo.....	13	5	2	20
Gualnabo.....	2			2
Guayama.....	19	26	4	49
Guanica.....	3	3	3	9
Guayanilla.....	3	4		7
Gurabo.....	1	1		2
Hatillo.....	1			1
Hormigueros.....	1	1		2
Humacao.....	11	15	2	28
Isabela.....	4	2	1	7
Jayuya.....	1	3	1	5
Juana Diaz.....	3	8		11
Juncos.....	7	12	1	20
Lajas.....			1	1
Lares.....	8	20	1	29
Las Marias.....	2	3		5
Las Piedras.....	3	2		5
Loiza.....	3			3
Luquillo.....	4	1		5
Manati.....	11	11		22
Maricao.....	1	1		2
Manabo.....	2			2
Mavaguez.....	19	45	16	80
Moca.....	4	6	1	11
Morovis.....	1	1	2	4
Maguabo.....	1	4	1	6
Marajito.....			1	1
Matillas.....	2	4		6
Mecenas.....	1		1	2
Monce.....	31	87	42	160
Muebradillas.....	1	1		2
Mincon.....	3	4	2	9
Mto Grande.....	1	5		6
Mto Piedras.....	3	15	4	22
Mabana Grande.....	2			2
Molina.....	7	10	2	19
San German.....	4	9	1	14
San Juan.....	25	138	49	212
San Lorenzo.....	5	3	1	9
San Sebastian.....	2	5	2	9
Santa Isabel.....	6	2		8
Sancti Spiritus.....	1	1		2
Sancti Spiritus Alta.....	3			3
Sancti Spiritus Baja.....	1			1
Sancti Spiritus Alto.....	5	11	2	18
Sancti Spiritus Alto.....	3			3
Sancti Spiritus Alto.....	1	8		9
Sancti Spiritus Alto.....	2	3		5
Sancti Spiritus Alto.....	1			1
Sancti Spiritus Alto.....	1		4	20
Sancti Spiritus Alto.....	8	10	4	18
Sancti Spiritus Alto.....	4			
Total.....	354	740	202	1,296

TABLE 37.—*Number of days' work performed by prisoners employed on the insular highways during the fiscal year 1918-19.*

MEN.

Month.	Penitentiary.	San Juan jail.	Arecibo jail.	Agua-dilla jail.	Mayaguez jail.	Ponce jail.	Guayama jail.	Humacao jail.	Total.
1918.									
July.....	2,993	31	275	269	697	765	183	1,568	6,781
August.....	3,810	690	175	383	543	1,259	658	1,851	9,369
September.....	5,656	2,589	.....	327	.....	2,108	719	1,655	13,064
October.....	5,331	2,869	.....	250	.....	2,045	1,637	1,775	13,957
November.....	4,700	2,035	.....	54	.....	1,546	1,202	1,386	10,923
December.....	4,040	1,488	.....	43	.....	1,319	744	950	8,584
1919.									
January.....	4,168	1,470	.....	54	.....	1,702	890	938	9,212
February.....	3,308	1,039	.....	269	.....	1,892	663	884	8,055
March.....	1,937	545	.....	219	.....	1,401	545	1,102	5,749
April.....	2,299	323	.....	448	480	779	230	1,027	5,586
May.....	2,895	260	.....	403	767	776	116	1,196	6,413
June.....	3,414	784	.....	231	523	526	127	860	6,465
Total.....	44,601	14,123	480	2,950	3,010	16,118	7,704	15,192	104,148

TABLE 38.—*Number of days' work performed by prisoners of the penitentiary and district jails in the cleaning of government offices and moving of office furniture, etc., during the fiscal year 1918-19.*

Month.	Governor's palace.	Office of the attorney general.	Department.					Executive secretary.	Office of the auditor.	Insular police.	Municipalities.	Courts.	Total.
			Educational.	Interior.	Agriculture and labor.	Sanitation.	Treasury.						
1918.													
July.....	274	.....	.....	1,586	61	896	34	47	.....	497	140	404	3,989
August.....	264	14	.....	2,066	74	901	126	48	.....	587	140	484	4,704
September.....	265	11	.....	1,616	60	1,085	50	35	.....	541	80	437	4,180
October.....	283	2	.....	1,524	52	1,440	19	32	.....	416	34	337	4,139
November.....	328	13	.....	1,597	52	1,385	10	34	9	492	14	290	4,223
December.....	334	12	.....	1,559	50	1,076	18	45	.....	479	.....	325	3,686
1919.													
January.....	302	4	.....	1,535	52	1,321	.....	56	.....	536	114	328	4,246
February.....	236	.....	.....	1,284	46	900	.....	45	.....	372	24	291	3,256
March.....	312	.....	.....	1,051	50	1,394	14	51	.....	457	92	355	3,776
April.....	310	3	35	929	50	1,353	8	72	.....	499	32	311	3,592
May.....	288	6	.....	687	48	1,668	.....	72	.....	471	44	362	3,646
June.....	308	14	.....	827	48	1,091	11	46	21	452	114	358	3,290
Total.....	3,504	79	35	16,261	643	14,570	290	583	30	5,789	828	4,261	46,893

TABLE 39.—*Table showing the ages of the children brought before the juvenile courts.*

Juvenile court of—	Total number of cases.	Years.												Un-known.	Over 16 years of age.
		15	14	13	12	11	10	9	8	7	6	5	4		
Agua-dilla.....	1 (33) 29	5	7	2	3	3	1	2	1	1	.....	1	.....	3	.....
Arecibo.....	16	7	3	.....	3	.....	1	.....	.....	.....	.....	.....	.....	1	.....
Guayama.....	9	4	.....	.....	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Humacao.....	27	4	5	3	3	1	2	3	1	1	.....	.....	.....	4	.....
Mayaguez.....	4	1	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ponce.....	90	13	17	13	13	13	7	.....	5	.....	2	.....	1	5	1
San Juan.....	106	26	15	22	13	2	10	2	.....	1	.....	.....	.....	15	.....
Total.....	281	80	47	40	40	22	21	7	7	3	2	1	1	28	2

¹ In Agua-dilla five cases were reported against one boy for delinquency. These cases should have been reported as one case, with various charges of delinquency, and in the summaries, the case is treated as one case.

TABLE 40.—Table showing the school attendance and education of the children brought before the juvenile courts.

Juvenile court of—	Never attended school.	School grade reached.									Un-known.
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	
Aguadilla.....	10	6	2	5	5	1	.....	.....	.....	.....	.....
Arecibo.....	5	.....	4	1	4	1	1	.....	.....	.....	.....
Guayama.....	.....	1	2	2	4	.....	.....	.....	.....	.....	.....
Humacao.....	9	7	4	.....	1	1	2	.....	.....	.....	3
Mayaguez.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ponce.....	42	11	10	12	10	5	.....	.....	.....	.....	.....
San Juan.....	75	4	14	7	2	1	2	.....	1	.....	.....
Total.....	145	29	36	27	26	9	5	.....	1	.....	3

TABLE 41.—Table showing the legitimacy of the children brought before the juvenile courts.

Juvenile court of—	Legitimate.	Recognized.	Illegitimate.	Un-known.
Aguadilla.....	22	.....	7	.....
Arecibo.....	9	.....	6	1
Guayama.....	7	.....	1	1
Humacao.....	6	2	9	10
Mayaguez.....	3	1	.....	.....
Ponce.....	54	11	23	2
San Juan.....	70	3	28	5
Total.....	171	17	74	19

TABLE 42.—Table showing the color of the children brought before the juvenile courts.

Juvenile court of—	White.	Mulatto.	Black.	Unknown.
Aguadilla.....	17	12	.....	.....
Arecibo.....	12	3	1	.....
Guayama.....	3	5	.....	1
Humacao.....	13	6	5	3
Mayaguez.....	3	1	1	.....
Ponce.....	44	33	5	8
San Juan.....	.....	.....	.....	106
Total.....	92	59	12	118

TABLE 43.—Table showing the persons with whom the children lived when they were brought before the juvenile courts.

Juvenile court of—	Mother alone.	Father alone.	Both parents.	Brother or sister.	Relative.	Friend.	Homeless.	Un-known.
Aguadilla.....	10	1	9	1	3	4	1	.....
Arecibo.....	9	.....	7	.....	.....	1	.....	.....
Guayama.....	2	1	5	.....	.....	.....	.....	.....
Humacao.....	13	4	8	.....	.....	.....	1	1
Mayaguez.....	1	.....	.....	1	2	.....	.....	.....
Ponce.....	34	17	14	1	.....	15	7	2
San Juan.....	34	11	9	2	.....	23	27	.....
Total.....	103	34	52	5	5	43	36	3

TABLE 44.—Table showing the persons who presented petitions alleging that the children were delinquent or abandoned before the juvenile courts.

Juvenile court of—	Probation officer.	Police.	Mother.	Father.	Relative.	Guardian.	Private parties.	Complainants.
Aguadilla.....	7	20			1		5	
Arecibo.....	3	11						1
Guayama.....		9						
Humacao.....	2	21	1	2				1
Mayaguez.....		3			1			
Ponce.....	1	68	5		2		9	5
San Juan.....	1	85	2	2	1		15	
Total.....	14	217	8	4	5		29	8

TABLE 45.—Table showing the crimes imputed or committed by the children brought before the juvenile courts.

Juvenile court of—	Larceny.	Assault and battery.	Breach of the peace.	Burglary.	Gambling.	Embezzlement.	Malicious damages.	False representation.	Infractions automobile law.	Infractions municipal ordinances.	Abandoned.	Immoral acts.	Incorrigibles.	Arson.
Aguadilla.....	24	3			1			1		1	1	1		1
Arecibo.....	12	2										2		
Guayama.....	4	2		3										
Humacao.....	13	6	1	5							1	1		
Mayaguez.....	4													
Ponce.....	47	14	1	1	3	4	2		1		9	4	4	
San Juan.....	23	11	5	22	5	6	1	4		4	20	5		
Total.....	127	38	7	31	9	10	3	5	1	5	31	13	4	1

TABLE 46.—Resolutions of the juvenile courts.

Juvenile court of—	Delinquents.	Abandoned.	Not guilty or filed.	Incorrigibles.	Pending.
Aguadilla.....	29	1	4		
Arecibo.....	9				7
Guayama.....	8		1		
Humacao.....	14	1	12		
Mayaguez.....	3				1
Ponce.....	57	8	23	2	
San Juan.....	18	9	11		68
Total.....	138	19	51	2	78

TABLE 47.—Table showing the persons in whose charge the children were placed by the juvenile courts.

Juvenile court of—	Reform school.	Charity school.	Parents.	Father.	Mother.	Relative.	Friend.	Not guilty or filed.	Special ward for girls.	Pending.
Aguadilla.....	8	1	1	8	5	2	2	2		
Arecibo.....	4			2	1				2	7
Guayama.....			5	1	1		1	1		
Humacao.....	9	1		2	2			12		
Mayaguez.....	3									1
Ponce.....	21	2	1	20	15	4	1	23	3	
San Juan.....	14	6	1	8	3	3	2	1		68
Total.....	59	10	8	41	27	9	7	39	5	76

TABLE 48.—*Changes in the personnel of officers of the Department of Justice during fiscal year 1918-19.*

Name.	Office.	Appointment.	Resignation.
ATTORNEY GENERAL'S OFFICE.			
Jaime Sifre.....	Special fiscal at large.....	July 3, 1918	(¹)
Do.....	do.....	Dec. 19, 1918	Apr. 17, 1919
George Swift Breglio.....	Law officer.....	Dec. 26, 1918	Jan. 24, 1919 ²
Ferdinand Tannentaum.....	Assistant attorney general.....		Apr. 22, 1919
Edmond Block.....	Law officer.....	Apr. 4, 1919	
Salvatore Mestre.....	Assistant attorney general.....	Apr. 25, 1919	
Rafael Rivera Zayas.....	Special fiscal at large.....	June 20, 1919	
SUPREME COURT.			
Salvador Mestre.....	Fiscal.....	July 3, 1918	(¹)
Joaquín López.....	Secretary and reporter.....	Dec. 10, 1918	
Salvador Mestre.....	Fiscal.....	Dec. 11, 1918	Apr. 24, 1919
José E. Figueras.....	do.....	June 19, 1919	
DISTRICT COURTS.			
Charles E. Foote.....	Judge, Mayaguez.....	July 3, 1918	(¹)
Santiago Vivaldi Pacheco.....	Fiscal, Ponce.....		Oct. 27, 1918 ³
José E. Figueras.....	Fiscal, Aguadilla.....		Nov. 20, 1918
Do.....	Fiscal, Ponce.....	Nov. 21, 1918	Dec. 7, 1918 ¹
Do.....	do.....	Dec. 9, 1918	June 18, 1919 ¹
Rafael Rivera Zayas.....	Assistant fiscal, San Juan.....		Nov. 20, 1918
Do.....	Fiscal, Aguadilla.....	Dec. 11, 1918	
Charles E. Foote.....	Judge, Mayaguez.....	Dec. 13, 1918	
Román Díaz Collazo.....	Assistant Fiscal, San Juan.....	Dec. 23, 1918	
MUNICIPAL COURTS.			
Angel R. de Jesús.....	Judge, San Juan.....		Aug. 27, 1918
Augustín E. Font.....	Judge, Aguadilla.....		Do.....
Do.....	Judge, San Juan.....	Aug. 28, 1918	(¹)
Valdejuli Rodríguez.....	Judge, Aguadilla.....	do.....	(¹)
Felipe Janer.....	Judge, Coamo.....		Sept. 23, 1918
Rafael Díaz Cintrón.....	do.....	Sept. 24, 1918	(¹)
Ricardo Díaz Ramos.....	Judge, Caguas.....		Sept. 30, 1918 ⁴
Antonio L. López.....	do.....	Oct. 1, 1918	(¹)
Victor Bureset.....	Judge, Humacao.....		Dec. 10, 1918
Antonio L. López.....	Judge, Caguas.....	Dec. 11, 1918	
Augustín E. Font.....	Judge, San Juan.....	do.....	
Rafael Díaz Cintrón.....	Judge, Coamo.....	do.....	
J. Valdejuli Rodríguez.....	Judge, Aguadilla.....	do.....	
José López del Valle.....	Judge, Humacao.....	Dec. 31, 1918	(¹)
Manuel Janer Soler.....	Judge, Añasco.....	Jan. 10, 1919	
Buenaventura Esteves.....	Judge, San Sebastián.....		Jan. 15, 1919
José Antonio Fleytas.....	Judge, Cabo Rojo.....		Mar. 6, 1919 ⁴
Francisco Montalvo.....	do.....	Mar. 7, 1919	
José López del Valle.....	Judge, Humacao.....	Mar. 5, 1919	
Francisco Cadilla.....	Judge, Utuado.....		Do.....
Do.....	Judge, Arecibo.....	Mar. 7, 1919	
Rafael Hernández Usera.....	do.....		Do.....
Salvador Vilella.....	Judge, Lares.....		Mar. 10, 1919 ⁴
Antonio Tollinchi.....	do.....	Mar. 11, 1919	
Juan Penedo Benítez.....	Judge, Fajardo.....		Mar. 3, 1919 ⁴
Fernando Vázquez.....	do.....	Mar. 4, 1919	
R. Arjona Slaca.....	Judge, Tauco.....		Apr. 30, 1919
Antonio E. Sulveres.....	Judge, Utuado.....	May 2, 1919	
Cristino R. Colón.....	Judge, Adjuntas.....		May 19, 1919
Cándido Cacho.....	do.....	June 20, 1919	
William J. Santos.....	Judge, San Germán.....		June 23, 1919
Do.....	Judge, Yauco.....	June 24, 1919	
Francisco R. Cortés.....	Judge, San Germán.....	June 26, 1919	
José S. Aybar.....	Judge, Vieques.....	June 23, 1919	
REGISTRIES OF PROPERTY.			
Pedro Gómez Lasserre.....	Temporary registrar, Guayama.....		Aug. 18, 1918
Do.....	Temporary registrar, Caguas.....	Aug. 19, 1918	
Francisco Socorro Ramos.....	Registrar, Caguas.....		Aug. 18, 1918
Do.....	Registrar, Guayama.....	Aug. 19, 1918	(¹)
Augusto Malaret.....	Registrar, Mayaguez.....	Dec. 12, 1918	
Francisco Socorro Ramos.....	Registrar, Guayama.....	Dec. 11, 1918	
Rafael López Antongiorgi.....	Temporary registrar, Humacao.....		Dec. 10, 1918
Victor Bureset.....	Registrar, Humacao.....	Dec. 11, 1918	
Pedro Gómez Lasserre.....	Registrar, Caguas.....	do.....	

¹ Recess appointment.² Reinstatement.³ Died.⁴ Term expired.

APPENDIX IX.

REPORT OF THE COMMISSIONER OF AGRICULTURE AND LABOR.

OFFICE OF THE COMMISSIONER,
San Juan, P. R., August 20, 1919.

Honorable GOVERNOR OF PORTO RICO:

In compliance with section 13 of the organic act of Porto Rico, approved March 2, 1917, I have the honor to make to you the annual report of the department of agriculture and labor for the fiscal year 1918-19.

PROGRESS MADE IN THE BRANCHES OF AGRICULTURE AND LABOR FROM 1899 TO 1919.

AGRICULTURE.

In the year 1901, there was created by the Federal Government an experiment station in the district of Mayaguez, with technical personnel for the study and promotion of agriculture in Porto Rico, in which station very notable work, favorable for the development and future of agriculture, was carried out, giving the utmost circulation to the experiments that were carried out there, the knowledge of which was always of great benefit to the agriculturists of Porto Rico, and that work is being prosecuted by said station.

On March 9, 1911, there was created, by virtue of an act, a board of commissioners of agriculture, composed of seven members, authorized to appoint the necessary employees, and whose duties were as follows: To publish from time to time statistics relative to agriculture; to study insects, pests, and diseases harmful to the agricultural interests of Porto Rico, and to devise ways to exterminate them; to dictate measures for the development and improvement of live stock; to enforce quarantine against plants and insects; and various other powers beneficial to agriculture.

In March, 1914, a law was enacted to accept the transfer that to The People of Porto Rico the sugar producers' association made of the experiment station at Rio Piedras.

Then, on March 2, 1917, the department of agriculture, for the study, advancement, and benefit of agricultural and other industries, was created by the organic act, and the Legislature of Porto Rico, in that same year, made the necessary organization. The services in the experimentation at Rio Piedras were likewise extended and organized.

Besides, from the year 1903 to 1916, the following laws were enacted:

To prevent the importation of diseased orange stock, etc.

To regulate the registration and inspection of commercial fertilizers, fertilizer materials, and chemicals, etc.

To prevent the introduction into Porto Rico of plant and insect diseases, and pests, etc.

Authorizing agriculturists to contract loans guaranteed by products and agricultural implements, etc.

Providing for the organization of agricultural training, etc.

To create an insular fair board for the purpose of holding an annual exhibition of agricultural and general productive industries, etc.

For the promotion of the commerce, industries, and agriculture, etc., appropriating \$25,000 therefor.

Providing for the study of the forestry needs.

Creating a municipal board of agriculture in each municipality.

To provide a forest service in Porto Rico.

In the fields, the progress of agriculture can be estimated by the following data:

	1918		
	Area.	Quantity.	Value.
	<i>Acres.</i>	<i>Tons.</i>	
Sugar cane.....	256,431	453,796	\$55,726,025
Coffee.....	147,612	18,809	5,505,316
Tobacco.....	23,981	8,598	8,962,130
Pineapples.....	3,286		695,325
Citric fruits.....	5,843		1,351,581
Coconuts.....	9,387		572,600
Total.....			72,832,977

As consequence of the horrible cyclone that occurred in 1899 and destroyed all the crop in that year, the official reports do not furnish sure data. In the 1910 census, the following data was found:

	1897	
	Quantity.	Value.
	<i>Tons.</i>	
Sugar.....	63,414	\$4,007,992
Coffee.....	25,855	12,222,600
Tobacco.....	3,128	1,194,315
Total.....		17,424,910

In that year the planting of pineapples and citric fruits for export had not been developed.

LABOR.

In 1899 there was no legislation protecting the workingmen in Porto Rico.

From 1902 to 1912 many bills were introduced in several legislatures which became laws, some of them of much importance, among which are the employers' liability act; the law regulating the hours of labor of railroad employees; the law establishing the eight-hour working-day in public works; the law prohibiting the payment of laborers' wages in anything other than lawful money; and others found in the compilation of the revised statutes and codes of Porto Rico, but as yet there was no personnel specially engaged to watch and enforce said laws.

On March 14, 1912, the act creating the bureau of labor was approved and since then said bureau has been giving efficient attention to the enforcement of labor laws.

Since the bureau of labor was established there has been no legislature in which some law has not been approved recognizing the rights of workers and protecting them against the calamities and risks derived from their occupations. To-day there is a number of laws which benefit laborers greatly, such as the following:

In 1913, (a) regulating the work of women and children and protecting them against dangerous occupations; (b) to provide for the construction of scaffolds, the protection of the public, and for other purposes; (c) amending the previous law regulating the hours of labor on public works, and for other purposes.

In 1915, providing for the sale to laborers of certain lands of The People of Porto Rico, and for other purposes.

In 1916, providing for the relief of such workmen as may be injured, or of the dependent families of those who may lose their lives while engaged in trades or occupations, and for other purposes.

In 1917, (a) to determine certain duties of employers in case of strikes; (b) to determine the procedure in cases of claims for wages by farm laborers against their employers; (c) to authorize the issuing of bonds for the purpose of constructing houses for artisans and laborers, provide for the leasing of the same with a certain right to the ownership thereof, improve the sanitary conditions of certain lands of The People of Porto Rico, promote the creation of farms to be leased to farm laborers, and to grant them title thereto, and for other purposes; (d) to protect laborers in their right to be members of labor organizations; (e) to amend an act entitled "An act to provide for the

construction of scaffolds, the protection of the public, and for other purposes," approved November 23, 1917; (f) to promote the welfare of the inhabitants of Porto Rico in regard to accidents causing deaths or injuries to workmen while engaged in their work; establishing the duty of employers to compensate their employees or heirs, as defined in this act, for injuries or death irrespective of negligence, and to provide ways and means for the enforcement of this duty, creating an insurance fund to secure employers against such liability and providing for the management and regulation of such insurance, creating a workmen's relief commission and determining its power and duties; establishing the liability of the people of Porto Rico with regard to their laborers for injuries or death of such laborers in works performed by administration, and for other purposes.

In 1919, (a) an act establishing minimum wages for working women, and for other purposes; (b) to regulate emigration from Porto Rico, and for other purposes; (c) law regulating the work of women and children, repealing the previous law of March and August, 1913; (d) to prevent and aid in the settlement of strikes and lockouts; (e) a law on labor contract, approved in 1917 and promulgated March 31, 1919, by virtue of a decision of the Supreme Court of Porto Rico, dated March 11, 1919.

BUREAU OF AGRICULTURE.

The work developed in this branch of the department has been carried out with great difficulties, at times insurmountable. The military service, on account of the war, was the cause of having all the young men of military age leave their positions, it having been possible to substitute them only in part. Thus it was that until the month of January of the present year the technical personnel could not be replaced, and as yet it is not complete, because of the inability to secure the qualified parties necessary to fill certain positions. Besides, the lack of funds for traveling expenses hindered somewhat the inspectors and deputy inspectors from discharging their duties in the fields because the sum appropriated for traveling expenses for the bureau of agriculture amounted to \$500 only. Fortunately, by means of transfers, making use of the surplus in other appropriations, it was possible to cover in part and little by little the needs of the service.

There are in the organization of this department two agronomical districts, the north and the south, with an inspector each. There are five divisions in each district, making in all 10 divisions, which comprise all the municipalities in the island, and each division is attended to by an agronomist and deputy inspector. These deputy inspectors have performed work, the purpose of which is twofold, to wit, the popularization of modern agricultural methods, and the rural organization. The former includes seed selection, crops and rotation of crops, preservation of grains, employment of natural and commercial fertilizers, and many other activities which have been directed and regarding which advice has been given in accordance with the conditions in which the properties which have been visited have been found. Besides the inspection, for this kind of work, use was made of lectures, demonstrations, and suitable literature which was prepared in the department, the latter consisting in reviews, bulletins, and other publications.

The deputy inspectors cooperated with the experiment station in the examination of fertilizers, securing and sending samples to the chemical laboratory.

For the purposes of rural organization, it is intended to have the agriculturists grouped so that they may cooperate in all the activities inherent to their occupations, stimulating them to establish cooperative societies for the purchase of all the commodities necessary to their properties, as implements, fertilizers, seeds, etc., and for the sale of the products of their farms. They are also stimulated to establish cooperative loan associations for the benefit of their own agricultural interests.

These divisions have been likewise engaged in making investigations of certain modern methods successfully established by some agriculturists, the results of which have been compiled and published for the benefit of agriculturists in general. Among the investigations practiced, special mention should be made of those concerning tractors, dipping vats, elephant grass, silos, and the palm-producing fiber suitable for the manufacture of hats; the planting of vanilla and of sisal hemp, which are being made in different municipalities on the south coast, and the planting of bayberry, which is growing to large proportions in the southeastern region. Investigation was likewise practiced, in the municipal district of Lajas, concerning the existence there of the horn fly, which attacks cattle, and the data thereon were referred to the division of entomology of the experiment station.

Each deputy inspector has in addition paid special attention in the municipalities of his division to the crops of greater importance and to the agricultural problems requiring prompt action. Among these lines the greatest efforts were applied to the work

of eradicating the mottling disease of sugar cane, in cooperation with the experiment station at Río Piedras. At two important factories, center of the mottling disease, the deputy inspectors directed the eradication work until the personnel who was to prosecute it was fully instructed.

In the district of the island adapted to the growing of onions, lying between the municipality of Arecibo and that of Isabela, the deputy inspectors gave advice in and directed the work of improving that crop and of preparing it for market, and they also paid special attention to the tick eradication and the improvement of bovine cattle.

During nine months of the fiscal year, for the work could not be commenced until the month of October, because of the lack of personnel, visits were made, in the north and south districts of the island, to 1,576 properties. Samples of diseased plants found on the farms, as well as specimens of insects and poisonous plants harmful to cattle, were forwarded to the experiment station for examination and report.

Sixty lectures were given with a total attendance of 6,478 agriculturists. The subjects of said lectures were as follows: Soils and fertilizers; Cooperative associations; Selection of seeds; The mottling disease of sugar cane; Municipal roads; Leguminous plants as fertilizers; Land; Improvement of the native cattle; Tick eradication; Farms; Fertilizers; Soil and its properties; Propagation of elephant grass as forage crop; Green manuring; Why our soils become poor; Fertilizer for tobacco; Insects injurious to coffee; Agricultural accounting; Economic condition of the agriculturist; The growing of sugar cane; Sources of natural fertilizers; How to treat soils the fertility of which has been depleted; The growing of tuberous roots; The growing of coconut palm; Rural organization; Keeping the soils fertile; Agricultural implements; The planting and cultivation of coffee; Agricultural exhibition at Coamo; Harvesting and preservation of grain; The department's plans as to the branch of agriculture; Dipping vats; Municipal roads; Influence of the rural teacher upon agriculture.

The two district inspectors answered 57 written inquiries, besides many other verbal ones of which no record is kept. The subjects of the inquiries were as follows: Literature on vegetables; Importation of grapefruit seedlings; Purchase of Holstein bulls; Examination of samples of a mineral; Preparation of rations for dairy cows; Examination of limestone; Raffia as bandage for grafting; Production of coconuts in Porto Rico; Silos and silage; Information on the sugar-cane disease; plans for silos; Construction of yards for the preservation of manure; Inspection of fruit plantations; On coconut-palm culture; Employment of fertilizers for sugar cane and coffee; Examination of soil for planting sugar cane; Dips for cattle and formulas; Construction of silos; Elephant grass; How to apply lime to soils; Information on textile plants; Information on the manufacture of marmalades; Proper food for poultry; How is coconut planted; Velvet beans for green manuring and for forage; Literature on citrus fruits; Information on the Guatemalan avocados; Various diseases of cattle; How to fertilize soils on which tobacco is grown; Information on the East India mango.

AGRICULTURAL ASSOCIATIONS.

The department has propagated through all the means of publication, in the press and in lectures, the organization of agricultural associations as the means of grouping the agriculturists for the defense of their own interests.

In Utuado an association came into existence for the sale of honey, but it has not as yet developed vigorously. In Aguadilla too an association has been started under the name of "Liga Agrícola de Aguadilla," with well-defined lines drawn in the direction of a complete and vigorous cooperative organization. This association, worthy of praise, is developing its activities to bring about the establishment of a cooperative agricultural bank, with funds subscribed by the agriculturists themselves, it having already formed native fruits agricultural cooperative associations, among which the coconut and the citrus fruits associations are already in operation.

MUNICIPAL BOARDS OF AGRICULTURE.

The Legislature of Porto Rico approved in November, 1917, an act creating a municipal board of agriculture in each municipality, endeavoring to have the different sources of agricultural wealth in each municipality represented as far as possible on said board. Their functions, prescribed by said law, were interesting, as the boards were to serve as the intermediaries between the department of agriculture and labor and the agriculturists of the respective municipalities and to render said department cooperation and aid for the benefit of the agricultural interests, for the purpose of agricultural and industrial statistics. These boards, in a large majority, have not answered the purposes for which they were created, as it appears from the reports rendered by the deputy inspectors. There are some exceptions, though few in number, where boards have developed some activities.

THE FARM LOAN ACT.

The farm loan act was approved by the United States Congress in 1916. The department of agriculture and labor, upon its organization in 1917, especially applied itself to study and translate that act, thus facilitating its publication in all the newspapers of San Juan.

The sections of said act being long and complicated, the department, heeding the suggestion made by some agriculturists interested in knowing the law, prepared and published commentaries thereon for the purpose of rendering it comprehensive.

The Governor of Porto Rico, on his own initiative, was engaged in arousing the interest of Senators and Representatives at Washington in the extension to Porto Rico of that law, which was enacted for the mainland of the United States only, with the exception of Alaska.

The governor, in accord with the commissioner of agriculture and labor, called to his office the representatives of the agricultural associations of the island for discussing the convenience of having that law extended to Porto Rico, upon which extension all agreed because of the existing necessity of promoting agricultural credit and the advantages of organizing the banks of the system provided for in said act.

The legislature, on its part, approved lately a concurrent resolution requesting the extension to Porto Rico of the act referred to.

In January, 1918, the department received, indorsed by the governor, a questionnaire from Washington, on the economic conditions of the island, on those of its agriculture and on the advantages that could be derived from the introduction of the system of farm loan. The governor was furnished with all the necessary data, and the study of the question clearly showed the necessity and convenience of establishing the system in Porto Rico.

The department of agriculture and labor has during the fiscal year studied a system of cooperative associations, with the end in view of propagating the ideas necessary to establish in a conscious manner the system of the Federal law.

In the month of June of the present year a new questionnaire was received from Washington on economic questions the knowledge of which the administration deems necessary to decide as to the convenience of extending to Porto Rico the Federal system of farm loans. The department has furnished detailed information that proves the need there is of establishing the system in Porto Rico, for the economic progress of our agriculture.

The department, through the *Revista de Agricultura de Puerto Rico*, the daily press, and the lectures delivered to the agriculturists, has endeavored to make known the advantages of having the aforementioned act made applicable to Porto Rico.

MUSEUM.

There is in the department a museum modestly established the purpose of which is to methodically and scientifically collect birds, reptiles, fishes, mollusks, insects, as well as minerals, rocks and plants, fruits and seeds, fibers, etc., the preservation of which may be deemed to be of some practical usefulness to agriculture or the industries derived therefrom.

During part of the present fiscal year the work of the officer in charge of the museum has been that of repairing and arranging the various collections already acquired and the material that is being from time to time secured, everything being prepared to make a good display.

INFORMATION.

There is in the department an office that furnishes information requested from abroad on matters concerning agriculture and industries.

During the fiscal year much information has been furnished to numerous applicants from the States and Europe on different subjects.

EXPERIMENT STATION.

FARM.

The experiment station farm comprises almost exactly 185.2 cuerdas. Of these, there have been under cultivation during the year for experimental purposes as follows: In sugar cane 48.65, in pineapples 0.67, mangos and avocados 2, grapefruit 1.57, bananas 1.09, and vegetables 0.82. The fenced pastures for the work animals measure about 38.17 cuerdas. The meadows from which grass has been cut and sold during the year measure approximately 12 cuerdas. Allowing about 12 cuerdas for the site of the laboratory, buildings, greenhouse, and nursery there remain about 80 cuerdas of unutilized thicket and grass land in the farm.

SALE OF FARM PRODUCTS, TRUST FUND.

From July 1, 1918, to June 30, 1919, there has been deposited with the treasurer of Porto Rico a total of \$3,804.23 collected from the sale of farm products, which was credited to the trust fund. The sources of income to the trust fund have been as follows:

Sale of grass.....	\$1,475.72
Sale of cane to be analyzed.....	2,213.30
Sale of pineapples.....	56.15
Sale of vegetables.....	50.06
Total.....	3,804.23

This trust fund, as provided by law, is available for expenditure in the performance of work for improving and promoting the agricultural interest of Porto Rico, and principally for the study of such prophylactic means as should be employed to prevent and avoid cane disease.

TRIPS OUTSIDE OF THE ISLAND.

Two trips outside of the island were completed during the year—one by the pathologist to Santo Domingo, in connection with the suspected presence there of the sugar-cane disease, and the other by Mr. F. S. Earle, plant breeder, to Cuba on pineapple quarantine question. The expenses originated by these two trips were met out of the trust fund.

LIGHT AND GAS.

By making use of the resources of the experiment station it has been possible during the last semester of the fiscal year to establish the electric-light and gas services, which the station formerly lacked. The laboratories have now all the advantages of a dependable source of fuel and the possibilities of using modern, electrically fitted equipment.

LIBRARY.

A well-furnished library is of great importance to the experiment station, deprived as the investigator is of the advantage of close proximity to well-stocked reference libraries, museums, and gardens. Special attention has, therefore, been given it, a librarian having been secured and placed in charge, and a number of works purchased. The catalogue of the publications in hand now is nearly complete, numbering more than ten thousand.

The library, in such conditions, furnishes the technicians who consult it useful and prompt informational data to the end aimed at of best serving the agricultural interests of Porto Rico.

AGRICULTURAL SERVICES.

The agricultural services of this station may be conveniently looked and reported upon as falling under four headings: (1) Services in compliance with certain special laws; (2) services of exploration, experimentation, and research along lines the importance of which justifies the time and expenditure involved; (3) accessory services which are maintained in the several divisions as necessary adjuncts to other lines of work; and (4) those services incident to the agricultural practice of the year, whereby the farmer's seasonal problems are recorded and, as far as practicable, immediate consideration and assistance tendered. In this last but fundamental phase of its activity the insular experiment station has been greatly aided and has worked in cooperation with the inspection service of the bureau of agriculture.

SUGAR-CANE SEED DISTRIBUTION.

In the joint resolution by which The People of Porto Rico accepted the donation by their owners of the experiment station at Rio Piedras a duty is prescribed to the effect of distributing gratis every year among the planters of the island no less than 300 tons of improved, prime sugar-cane seed. The division of agronomy of the station has been in immediate charge of the fields devoted to this purpose and has cooperated with the director in the orderly and equitable distribution of the seed. During the season 1917-18 two main distributions were made in the fall and in the spring. The total tonnage distributed summed up to approximately 316 tons at an estimated value of \$3,160. This service is being organized in such a way that the results obtained with the different varieties of sugar cane in the various localities in which they are planted, may form the basis of judgment as to their adaptability to the conditions prevailing.

COFFEE.

The 1918-19 coffee harvest has been one of the scantiest in the last few years. This shortage in production as well as the difficulties experienced during the year through lack of shipping space, and other restrictions on exportation occasioned by war conditions have been, in part, compensated by the good prices obtained for the crop, the latter having risen at times to \$31 and \$32. Naturally interest on the improvement of the groves is now more noticeable and should be taken advantage of to place the farms on a firm financial footing. Besides the well known coffee troubles in Porto Rico, evidence has been received of an unusual damage to coffee in twigs which showed signs of having been gnawed by mice. The trouble has been reported only as local.

TOBACCO.

Reports of tobacco worms having gotten beyond control this year in the region of Hatillo and Juncos, samples of the insecticides used were taken and found all right after analysis in the division of chemistry.

CITRUS FRUITS.

Attention has been devoted by the station to the loss occasioned to citrus growers by rot in their shipments and efforts made to bring the facts of the case to their notice. It being considered convenient for the citrus growers to be able to distinguish among the various markings which depreciate the market value of their product, their appearance and characteristics were made available to them in our circular 16. These and other points of interest were treated in a conference of citrus growers held May 21 at Rio Piedras under the auspices of the insular experiment station.

PINEAPPLES.

The good prices prevailing in the pineapple market have stimulated growers to plan further plantings. The increase in demand for slips coupled with the scarcity of their production in the ratoon fields and in some of the neglected plant fields made it necessary to look toward Cuba as a source of supply. The importation of slips from Cuba having been provisionally prohibited for fear of the pineapple weevil of Jamaica, Mr. F. S. Earle, an agronomist and expert of the experiment station, was commissioned to visit Cuba and look into the matter. Based on his report, the importation of slips from Cuba will be permitted under certain restrictions. Aside from the scarcity of slip production above referred to and indications that white-grub damage to the pineapple plant is more common than generally thought of, no other troubles of the pineapple grower have come under our notice.

COCONUT PALMS.

Through samples submitted by the deputy inspectors of the bureau of agriculture, cases of palms persistently dropping their young nuts have been brought to the attention of the station. It is planned to look further into this matter. The work of the rhinoceros beetle on the coconut tree is also under observation.

BANANA TREES.

The banana wilt continues to be reported doing damage to the crop. The usual recommendations have been made. The Mayaguez Federal experiment station has been for years studying the disease. The complete report, now in press, is awaited with interest. Cutworms have also done injury to the banana during the season.

SWEET POTATO.

The sweet potato weevil and a sphinx moth have been doing injury to the crop. The division of entomology has utilized all means at its disposal to enlighten the farmers as to the nature of the trouble and the known measures for prevention and control.

During the year a goodly number of requests for vegetable, grass, and leguminous seeds for soil improvement have been received and filled. In many cases ornamental plants have also been given away to petitionaries and callers.

PLANT QUARANTINE.

The enforcement of the plant quarantine act to prevent the introduction into Porto Rico of diseased plants, and pests and insects injurious to agriculture, rests with the division of entomology of the experiment station, assisted by four inspectors at the ports of San Juan, Ponce, Mayaguez, and Ensenada.

Every effort is made to exclude from entrance anything that may be injurious to native plants. And whenever plants are brought showing infestation or contamination they are promptly fumigated or destroyed, or ordered transhipped, as the case may call for. All tropical fruits are denied entrance because of the danger of introducing injurious fruit flies and weevils.

Great is the benefit to Porto Rico resulting from the plant quarantines, and from the rigid inspection of plants, fruits, and seeds that is maintained at the ports of the island by the quarantine inspectors of this department.

At the port of San Juan the inspection was done by the entomologist and the assistant entomologist of the station, and the amount of plant material handled in a year is considerably large, since it includes here in San Juan all mail matter coming to the island, in addition to most of the freight, express, and baggage received from foreign ports.

In the "Revista de Agricultura de Puerto Rico" of this department, the monthly work is published in detail with expression of the plants and the names and disposal made of these.

The following is a recapitulation of inspections made during the fiscal year:

Mail matter:	
Parcels inspected.....	1, 122
Parcels fumigated.....	147
Parcels returned or destroyed.....	22
Pests intercepted.....	155
Express and freight.	
Boxes or sacks inspected.....	1, 067
Boxes or sacks fumigated.....	812
Returned or destroyed.....	5
Pests intercepted.....	20
Fruits:	
Inspected.....	2, 771
Destroyed.....	1, 584
Living plants:	
Inspected.....	53
Fumigated or quarantined.....	29
Destroyed.....	1
Vegetables, seeds, etc.	
Inspected.....	778
Fumigated or quarantined.....	254
Destroyed.....	1
Pests intercepted.....	45

FERTILIZERS.

The enforcement of the law of fertilizers, as refers to the duties of the department, rests with the division of chemistry through the director of the experiment station, assisted by the deputy inspectors of agriculture in their respective districts in the island.

In compliance with this duty, samples of fertilizers of all brands offered for sale during the year have been secured through the deputy inspectors of agriculture and the employees of this division, and these samples analyzed and the results published monthly in the "Revista de Agricultura de Puerto Rico." During this year bulletin No. 18 containing all the data in regard to the fertilizer inspection for the year 1917-18 has been prepared and published; a bulletin containing the results obtained during this year is in preparation, and will soon be ready for the press. Besides this, official action has been taken at the request of the parties concerned, to settle disagreements as to the value of fertilizers found to be below guaranty, or to verify the terms of a transaction through official analyses of the products concerned. The contracting parties have invariably abided by the decision of the station, and rebates have been paid by the seller wherever this has been required by the results of the analyses. In general, it may be said that the long established and responsible firms dealing in fertilizers in the island have endeavored to be always within the law, but a number of adventurers in the field, and unscrupulous dealers have been identified, and their deceits exposed.

Samples of fertilizers have been sent by farmers who desire to verify the guaranty on which they were bought. These samples have been analyzed free of charge on condition that the senders furnish us with the following data: Name of the dealer or agent, name of the manufacturer, guaranty offered, and price per ton. These data are necessary to keep recorded the behavior of the different dealers, and to be able to give full information on the amount of fertilizers sold.

In all, 127 samples of mixed fertilizers and fertilizer materials have been analyzed representing every brand offered for sale in the island. Of these, 100 samples have been taken officially by agents of the department or of this station, and 27 have been sent by planters in the island. Of the 100 official samples, 17 per cent were found to be below the guaranty, a decided improvement on last year's record, when 63.8 per cent of the official samples were found to be deficient in some ingredient or other. This is the best showing made here in fertilizer control, but a great number of samples

should be secured so as to be sure that this improvement is real. Four samples were sold without any guaranty in open violation of the law.

Some samples have been tested for injurious substances, such as arsenic and boric acid, and found to be free of them. This search after deleterious substances will be continued.

Of the 27 samples sent by private parties only 17 were furnished with guaranties. Of all samples submitted for analysis only four were found to be below guaranty.

A number of analyses of other substances other than fertilizers have been made for the public. These have been mostly of guanos and soils. The guano samples have come from cave owners who wished to ascertain the fertilizing value of their guanos for using them in their own farms. The soils were analyzed to obtain information about plantations whose owners wished to be advised as to the fertilizing needs of their soils. The reports received from the people to whom advice has been given are very encouraging, and the work will be continued.

Twenty-five samples of guano were received and their content of nitrogen, phosphoric acid, and potash determined. The maximum content of nitrogen as ammonia found was 4.76 per cent, while the lowest content was 0.10 per cent, the average being 1.44 per cent. The percentages of potash were still lower, the maximum being 1.11 per cent. One sample contained none at all, and the average was 0.46 per cent. It is for their phosphoric acid that these guanos are chiefly valued. The highest percentage of phosphoric acid found was 21.6 per cent, the lowest 2 per cent, and the average 9.4 per cent.

DIVISION OF CHEMISTRY.

Besides the intense work carried out by this division in the analyses of fertilizers and other substances enumerated under the heading of fertilizers, manifold works have been carried out by this division.

Twenty-six samples of soils and subsoils were received from farmers in the island, especially from fruit and cane planters.

Besides these, a number of miscellaneous samples, including lime, limestone, minerals, water, crude oil, insecticides, etc., which will be detailed in the summary of the report, were submitted for analysis. Likewise a number of canes were analyzed.

Cooperative work was carried out with the division of agronomy, which consisted in the analyses of the seedling canes of this station for their classification and selection. One hundred and eight samples were analyzed for total solids and sucrose; besides, diameter of the stalks, the length of the canes, and their individual weight were ascertained, as well as the per cent juice extracted from each sample.

As regards investigational work, the following problems received attention during the year:

(a) The grapefruit investigation was continued. Not only were the juices analyzed as heretofore, but a new line of investigation was established by analyzing the ash of the fruit and the soils on which the trees stood, for the purpose of establishing the relation, if any, between the mineral content of the fruit and soil composition. In connection with this work six samples were analyzed for ash, nitrogen, phosphoric acid, and potash; 47 samples of whole fruits were analyzed for the same ingredients, and 47 samples of juice for total solids in solution, citric acid, sucrose, and reducing sugars. Each sample consisted of 10 fruits picked every 15 days from trees set aside in 8 different plantations. In addition 15 samples of soils were analyzed in which determinations of nitrogen, phosphoric acid, potash, lime, iron oxide, volatile matter, insoluble residue, and moisture were made. In each fruit the following measurements were made: Diameter, weight, and thickness of skin, and in each sample the per cent skin and per cent juice extracted were determined. A full report of the work performed will be published in a coming number of the *Journal of Agriculture of Porto Rico*. The work on the ash will be continued, if possible, next season.

(b) A study of the Caledonia cane variety to ascertain whether it is a convenient variety to plant or not under our conditions from the chemical standpoint. This investigation was started with the purpose of settling the frequent disagreements arising between factory managers and planters or colonos as to the advisability of planting this variety of cane. The managers usually oppose the planting of the Caledonia cane by the colonos on the ground that it is too poor in sucrose, while the latter insist on planting it on account of its magnificent stand and high tonnage. So far no definite conclusions have been reached, and the work will have to be continued next season. Nine samples picked at intervals of one month were separately analyzed for sucrose, solids in solution, reducing sugars, fiber, and sucrose in bagasse.

(c) Analyses to compare the composition of juices of diseased canes with juices of healthy canes of the same variety were performed in the experiment station and at central Bayaney. Forty-two samples were analyzed, and determination of acidity.

reducing sugars, sucrose, and total solids effected. Besides, a study of the enzymes of sugar cane in their relation to the yellow stripe disease was started in cooperation with the director. These works are also to be continued.

(d) Tests were made in cooperation with the director to find the loss in weight in canes that have been burned, as well as to determine the amount of inversion suffered by the juice of burned cane. For the purpose analyses were made of cane before burning and of burned canes, both standing and cut. More tests of this kind will be made until enough data are available to arrive at conclusions. Twenty-four samples of Caledonia and Porto Rico 209 were analyzed in conducting these tests. This work was prompted by the frequent inquiries on the points received at the station both from factory managers and from planters. A number of miscellaneous samples of agricultural or industrial importance have been analyzed.

The following is a summary of the work performed during the year:

Materials.	Number of samples.	Number of determinations.	Materials.	Number of samples.	Number of determinations.
Fertilizers, official samples.....	100	230	Miscellaneous:		
Fertilizers, farmer's samples.....	27	65	Limestone.....	5	10
Guanos.....	25	75	Lime.....	7	14
Soils.....	41	328	Minerals.....	4	13
Fruits:			Molasses ashes.....	1	8
Juices.....	47	188	Rock salt.....	1	2
Wholefruits.....	47	141	Crude oil.....	1	2
Skin.....	6	24	Formalin.....	1	1
Juice ashes.....	6	24	Molasses.....	1	2
Pulp ashes.....	6	24	Sugar.....	1	1
Sugar cane:			Lead arsenate.....	1	2
Seedling canes.....	108	216	Calcium arsenate.....	1	2
Caledonia.....	9	45	Bagasse ashes.....	1	1
Burned canes.....	24	96	Cocunut hull ashes.....	3	3
Cane diseased.....	42	168			
For private parties.....	4	8	Total.....	520	1,663

It must be remembered that with the exception of the determinations made in cane, all others were made in duplicate, so that the total number of determinations would be much higher than the number here given if the duplicates were taken in consideration.

The following is a list of subjects of study that will engage the attention of the staff of this division during the ensuing year:

1. Study of the Caledonia cane variety to determine its commercial value as a sugar producer. (Continued.)
2. Extent of the inversion in juice of burned cane, and of cane cut and piled without burning and after being burned, and factors affecting it. (Continued.)
3. Study of the changes in juice in the chemical composition of sugar cane by the yellow stripe disease. (Continued.)
4. Relation between ash composition of grapefruit and soil composition. (Continued.)
5. A study of filter press cake to determine its fertilizing value and the conditions under which it should be used.

DIVISION OF ENTOMOLOGY.

The principal work of the division during the year has been directed along three lines: (1) Plant quarantine work at the port of San Juan; (2) experiments to ascertain the possible transmission of the cane mottling disease by insects, and life-history work on cane pests incidental thereto; and (3) census and experimental control work on the citrus insect pests. Practically all of the experimental work has been conducted on the experiment station grounds, though there has been a number of field trips made to secure specimens or investigate unusual outbreaks of insect pests.

The chief of this division was absent in a cantonment from July to December, 1913, and this absence interfered with progress on the experiments, for only one assistant entomologist was at the time on duty.

The private library of the entomologist, which represents an accumulation of bulletins and other literature extending over a period of 20 years, and which is kept in the laboratory for use of the division staff, has been assorted and arranged in such manner that the literature on any insect may be readily referred to.

Under the headings of "plant quarantine" and "sugar-cane disease" appears the work done by the division of entomology on those subjects.

WORK ON CITRUS INSECT PESTS.

During April a very careful census was taken of the insect pests in a citrus grove on the experiment station grounds, so that an accurate knowledge might be gained of the amount of benefit that may be derived from a thorough spraying with oil emulsion. The spraying was made in May, using the paraffin-oil emulsion formulæ recommended on page 122 of the annual report for 1916-17. As the trees were all small, a compressed-air hand sprayer was used. The results showed that the eggs of practically none of the scale insects common on citrus trees are 100 per cent killed by a simple application of the spray at the strength advised, and of some of the scales few eggs were killed. Two sprayings in succession, with a week to two weeks between, are therefore recommended. The results showed also that the mealy bugs are little affected by the spray at the regular strength. The spraying of some guava trees to control *pseudococcus nipse* (mask) showed the same results. It is doubtful if the Yothers oil emulsion spray could be increased sufficiently in strength to control mealy bugs without injury to the trees.

Among the insects encountered in the orchard, there were at least six that have not previously been recorded from Porto Rico, to the entomologist's knowledge, as breeding upon citrus foliage. One of these was the star scale, *vinsonia stellifera* (Westw.), which, in common with the brack scale, was heavily parasitized by a fungus, *ascersonia turbinata*. The scale is a common pest of mango, coconut, and pomarosa at Rio Piedras, and has been observed by the entomologist on Cattleya orchids. Another new citrus pest was *ormenis pygmaea* Fab., which though often collected on citrus by members of the station had not before been recorded as breeding on the tree. It was found in all stages from egg to adult, and adults were reared in confinement. During June young citrus sprouts in the orchard became heavily infested by the adults, which doubtless did considerable damage. This pest breeds abundantly upon the wild bushes *cordia corymbosa* and *C. cylindrostachya*, and has been observed by the entomologist breeding also upon young coffee foliage and the passion fruit vine. On one instance in a coffee plantation, in May, 1918, adults were found heavily parasitized and killed by a green fungus determined by J. A. Stevenson as *metarhizium anisopliae*.

Other new citrus pests were in orange-brown thrips, undetermined; two mealy bugs, one evidently *pseudococcus citrophilus* Clausen, the other very close to *P. longispinus*, a bagworm, which was not successfully reared to the adult; and the larvæ of an arctiid moth which is not yet determined. Several mealy bugs were observed to be parasitized by larvæ of a small micropterigid moth, and an adult of *P. citrophilus* was photographed, much enlarged, showing two pupæ of the moth projecting from it.

At time of the first examination of the orchard in April, many terminal leaves were found curled and distorted, and their lower surfaces bore hundreds of empty shells of the parasitized black citrus aphid. During May some trees became considerably infested with the citrus leaf roller, which is the larvæ of a black hesperid butterfly, *eantis thraso* Hubn. Adults of a fulgorid leaf hopper that holds the wings expanded like a flag, and which has been determined as *bothricera* sp., were quite common on the twigs of grapefruit, especially on well-shaded limbs, but none of the younger stages could be found. This insect has also been observed feeding upon sugar cane in March.

The chief of the division of entomology has made trips during the fiscal year to 12 towns of the island to investigate infested plants, to inspect pineapple plantations, and note the insect pests there present; to instruct farmers how to control pests; to give lectures on pests; to inspect a large shipment of cane cuttings from abroad, and for other purposes in connection with the duties of his division.

DIVISION OF PATHOLOGY AND BOTANY.

The chief of the division left for the States in December, 1918, ceasing in his position on account of his resignation; and the division has done its work under an assistant and another technician in plant pathology. The assistant entered upon duty in December, 1918.

The chief of the division, who ceased in December, and the assistant, who entered upon duty in that same month, spent a considerable amount of time each month on trips to various parts of the island to examine reported outbreaks of plant diseases. In practically every instance the disease was identified and the proper explanation and recommendations were given to the growers. On several occasions trips were made with the view to discover possible hitherto unknown factors concerned in crop failures due to certain disease and to obtain more exact knowledge of the organisms associated with the diseased plants. These phases of field work have been followed by laboratory study of a technical nature and experimentation to test the pathoge-

nessity of the associated organisms. In practically all instances where plants showed a more or less widespread disease a study was made of the nature of the diseased tissue. It was found that the fungus rhizoctonia is quite universally distributed and it grows on the lower parts of a variety of plants, and that *pythium* and *phytophthora* species are quite common here. The parasitic nature of these organisms is well known and a great deal of root disease as well as leaf and fruit disease is due to these. Several forms of rhizoctonia were isolated from diseased tissue of lettuce, beets, carrot, parsnip, tomato, eggplant, field pea and cowpea, also from roots of banana, yautia, corn, and sugar cane. *Phytophthora* was isolated from tomato fruits, peapods, citrus trees, and yucca, and *pythium* from yucca and sugar cane. With the knowledge of the presence of these organisms in the soils here the problem of root disease of plants, which is after all the most important factor in crop production, becomes more defined. Experiments have been started to determine which of these forms are capable to produce root rot, and also to determine their specific characters. The cowpea rhizoctonia has proved to be a specifically different organism from the others, while *R. solani* is capable of producing a root rot of sugar cane. This work will be continued until definite data are obtained and methods of treatment are found.

Attention was given to citrus diseases. An experiment to reduce decay of fruit was conducted at one of the packing houses. It was found that when fruit was picked and packed the same day not more than 2 per cent rot occurred after two weeks in the box, and that soaking the fruit in 1.1000 bichloride of mercury for 10 to 15 minutes reduced the rot to a large extent, provided the calyces were removed. A black spot of the grapefruit, resembling melanose was studied, a slow growing fungus was obtained from the affected tissue, inoculation tests with this organism were made. *Phytophthora terrestris* was found in association with foot rot of citrus. Scab continues to be the chief trouble here in some groves. The factors influencing the development of scab in Porto Rico were studied in the field with the view to evolve a practical means of control.

Root disease of sugar cane was given close attention. Tests with *marasmius*, *rhizoctonia* and *pythium* as well as other organisms from cane were made on young rootlets of cane planted in sterilized soil and in moist chambers. *Rhizoctonia* and *pythium* have produced decay of roots in a few days while *marasmius* did not seem to produce any appreciable change in the growing rootlets. In connection with root disease of cane work is being done with pure cultures obtained from spores of such fungi as *corticium* sp., *odontis*, and *schizophyllum* which are commonly found on dead parts of cane. These fungi while in their fruiting stage seem to live mostly on dead parts of plants, nevertheless in their vegetative state they may have parasitic habits. Another fungus which is sometimes found on lower dead leaf sheaths of cane in the form of sclerotia was also studied and tested as to its ability to cause injury to roots and leaves of cane, and was found capable of infecting leaf tissue and to cause decay of rootlets. The purpose of this work is to find out through tests under controlled conditions which are the really injurious organisms in the cane fields.

Inquiries regarding plant diseases and their treatment have been given due attention. A conference of the citrus growers was held at Rio Piedras, and special trips to the citrus-growing section were made to advise on method of treatment against foot rot and scab of citrus.

The division of pathology possesses a valuable collection of Porto Rican plants in its herbarium, and more time will be given in the future for its enlargement.

Studies were made of a *diplodia* rot of coconut, *diplodia* rot of avacat, and a rot of cacao, apparently due to the same organism. These fungi and the *diplodia* from citrus stem-end rot constitute another group of forms of the same genus which is of importance here. It is planned to direct the work along a certain group of fungi rather than to work out at one time the specific diseases of a given host plant. We have started with the *rhizoctonia* group of which we have quite a number of forms from different host plants, the same idea may be carried out with *phytophthora* and its related form *pythium*. The advantage of such a procedure is that we gain a correct idea of the position of the organism concerned in the cause of the disease and to its being transferable from one plant to another.

SERVICE OF AGRONOMY.

There were in the budget of the experiment station one plant breeder and one horticulturist for the fiscal year 1918-19.

The plant breeder ceased in July, 1918, to take a higher salaried position in the States, and until the month of April, 1919, it was not possible to find a professional substitute for the position of plant breeder. During all that time only the horticulturist was on duty.

In the budget for 1919 to 1920 and 1921 a division of agronomy is created with one chief agronomist, one specialist for the breeding of new varieties of plants, and one horticulturist.

The principal work for the year has consisted in caring for and harvesting the different cane plantings and in preparing land and making new plantings. From the field of seedlings grown in 1918, 144 of the best have been selected and planted for further trial. This makes a total of 371 varieties now growing on the station grounds. Of these, 16 are selections from the seedlings grown in 1912, 45 are from the seedlings of the two years 1913 and 1914, 27 are from those of 1915, 76 from those of 1916, 36 from those of 1917, while the remaining 27 are foreign kinds. The proper study of this great mass of material will require all the resources of the division for several years to come. It will be necessary to determine for each of them its adaptability to and probable tonnage on each of the principal soil types of the island; whether adapted to high dry hills or to wet low lands; whether it will respond to irrigation and high fertilization; its sugar content and purity under all of these conditions; its season of maturity, whether late or early; its ratooning power and its resistance or susceptibility to various insects and diseases. In view of the great labor which all this involves, it has seemed best to temporarily suspend the wholesale production of new seedlings at least until those already in hand have been better assimilated. In accordance with this policy, no new seedlings have been produced this year. The only seed planted was from a few arrows from cane showing the yellow stripe or cane mosaic disease usually known in Porto Rico as "mativado," the object being to determine whether or not this disease could be transmitted through the true seed. As no germination was secured, the point was not determined. For the next few years the policy would seem to be to only plant seeds from crosses with the immune Japanese cane, Kavangire, or from other crosses that gave promise of giving varieties resistant to this yellow stripe disease.

In accordance with the law, much of the cane grown has been cut for seed and distributed without cost to such planters as have applied for it. A total of 316 tons has been distributed in this way to 92 different planters in all parts of the island. A considerable amount of cuttings of elephant grass has also been distributed. This seems to be attracting more and more attention as a valuable forage plant for all kinds of live stock.

Two rather lengthy circulars are now in press. One of them is entitled "Suggestions on cane cultivation in Porto Rico." It is intended to call attention to the necessity of adopting cheaper and more effective methods of cultivation to meet the changed commercial conditions following the war and the probability of a considerable fall in sugar prices. The principal topics discussed are preparation of land for planting, ratoon cultivation, and fertilizers.

The other circular is entitled "Varieties of sugar cane in Porto Rico." It comprises two quite distinct parts, the first dealing with the cultural value and characteristics of cane varieties in Porto Rico, in which the attempt is made to estimate the cultural value of the varieties now found on a commercial scale in Porto Rican cane fields; in other words, this part of the circular is devoted to the agricultural aspect of cane varieties. The second part of the circular considers them from the botanical view point and is entitled "Description of some varieties of sugar cane now grown in Porto Rico. The taxonomy of cane varieties." The attempt is here made to give a botanical description of each of the varieties discussed by which it would be possible for others interested to recognize it, and a key is arranged as an aid to the determination of varieties.

The horticulturist has given special attention to banana varieties and their culture, over an acre having been planted with the different varieties grown on the island. He has also given his attention to production tests with different varieties of vegetables and garden crops.

The pineapple fertilizer experiment mentioned in the last annual report has been continued, as well as the fertilizer experiment with sugar cane on the red clay uplands that has been in progress for several years. The results of both of these experiments will appear in the near future as articles in the Journal of the Department of Agriculture.

THE YELLOW-STRIPE DISEASE OF SUGAR CANE.

In the year 1915 the infected area stretched from a point east of Arecibo to Aguadilla.

The first one to discover the disease in this island was Mr. Stevenson, chief of the pathological and botanical laboratory of the insular experiment station, under the control, at the time, of the board of commissioners of agriculture.

In 1917, upon the establishment of the department of agriculture and labor, a careful investigation of the infected zone was also made by Mr. Stevenson, who found the disease covering an area more extensive than that reported in the previous investigation, now including Manatí and parts of the Vega Alta and Toa Alta valleys to the Añasco valley. At the time the disease was confined to upland fields, the higher part of the valleys, and the mountain sides; but it had not yet invaded the lower part of the coast valleys. Arecibo and Aguadilla were the sections most affected and where

greater damage was caused, some fields having during that year been abandoned on account of their canes having been practically destroyed.

The loss occasioned consists of reduced yields, for not only are the diseased stools smaller, but there is a larger proportion of stalks rotted by secondary causes or otherwise rendered worthless. The juice in the diseased stalks not only diminishes but undergoes an alteration as well, running high in glucose and low in sucrose, making elaboration difficult in the factories and yielding a small amount of sugar.

The marked symptoms of the disease consists of the mottling of the leaves and in advanced cases of the stalk cankers and sometimes of shrunk joints and stunted stools.

It can not be said that the disease attacks only one variety, all the varieties existing in the island having been found infected. The striped cane, which at first appears to be resistant, afterwards has, in many sections of the island, proved to be as weak as the white.

The causes of the disease are unknown so far. The work performed up to the present in the laboratories of the experiment station and on the field has accumulated interesting data that will permit in the future to reach conclusions pointing out a sure way of determining the causes of the disease, that, once known, will render possible the studying of the remedy and the procedure to prevent it and stop its propagation.

Without going into details, which hereinafter will be found in the reports of the laboratories of the experiment station, it may be said that the yellow-stripe disease is a degeneration of the varieties cultivated by the nonscientific methods employed in our fields. One and the same plant is cultivated indefinitely on the same soil until the latter is exhausted, and when the fertilizers are employed as the means of replacing the materials extracted by the plant in its process of nutrition, the soils are not analyzed, the components of the fertilizers in the proportion necessary to each parcel are not selected, and no care is taken of applying amendments.

In general, no practice is made of selecting seed, of crop rotation, neither barnyard nor green manure is utilized, nor the practices of scientific agriculture are orderly and methodically employed, agricultural exploitation resulting thereby to be expensive and harmful; because the established practices necessarily lead to soil exhaustion and to the degeneration of the varieties which on being degenerated become susceptible to all kinds of diseases.

It is to be hoped that the labor of the bureau of agriculture in the work of extension of the efficient knowledge and practices of agriculture, with the cooperation of the laboratories of the experiment station, will change the routinary practices of old established methods.

The pathologist Mr. Stevenson in a trip made to Santo Domingo, in commission of the service, to study the varieties imported by the central Guánica for its mills, found the yellow-stripe disease localized in small areas on the fields of various centrals. There the disease was unknown.

The same happened in Cuba and Hawaii, where the publications of Mr. Stevenson made the disease known.

The secretary of agriculture of Cuba addressed the department requesting authorization to publish there circular No. 14 of the experiment station, the said authorization having been with pleasure granted and the colored plates contained in said circular forwarded.

The purpose of circular No. 14 was to correct the erroneous impression that the disease locally known by the name of "mottling" was a new and unknown thing, to state clearly and directly the facts established in other countries and in Porto Rico related to it, and to dictate the measures that should be taken to check its advance.

In relation to the disease aforementioned the different organisms of the department have developed the following activities:

EXPERIMENT STATION.

The importance of yellow stripe to the agriculture of the island has long been acknowledged by this station by giving it prominent place among the subjects for investigation. However, the matter of its spread having required action other than along lines of further study, the nature of this action will be briefly indicated here. Samples of cane sent to this station from all over the island have been examined for the disease. Whenever these have come from a district not theretofore reported as contaminated, a trip of inspection has been made, the extent of the infestation ascertained, and the means of eradication explained and persistently brought to the attention of the parties concerned through circular 14, circulars and personal letters, and notices and articles in the daily press. Similar action has followed individual calls from planters to visit their places. The deputy inspectors of the insular bureau of agriculture have played an important rôle in this work, through the extension activities undertaken under its direction.

ENTOMOLOGICAL WORK.

All available time during the year has been devoted to the problem of the artificial transmission of the cane mottling disease by insects. The experimental work was started with the juice of a dozen large outdoor screened cages containing growing cane, two of them with diseased cane. Insects were first introduced into the cages with diseased cane, and after a variable length of time in these, up to a week, they were transferred to cages containing healthy cane. The cane in the latter cages was then watched closely for a period of over six months, so as to note any evidence of the appearance of the mottling disease on the cane.

Experiments similar to the above have been made by confining large numbers of cane-feeding insects in cages that contained both mottled and healthy cane, then observing the healthy cane to note any evidence of attack by the disease. Other insects are being similarly tested.

Early in the year 1919, the division of entomology acquired the use of a glass covered and screen sided plant house near the station laboratory, and put it to use with the canes in pots from seed (stalk sections) known to be free from the disease, and as each sprout appeared above ground it was covered with a glass lamp chimney, with cloth tied over top. This, in the greenhouse, simulated as nearly as possible outdoor conditions, at the same time excluding the entrance of insects to the cane. Healthy plants grown in this manner were subjected to the attack of insects that were either collected from mottled sugar cane in the field or had been reared from or confined upon mottled cane in the laboratory. Healthy cane plants that had been subjected to the attack of an insect or of insects from mottled cane in the above manner were transplanted as soon as practicable to the field in fertilized soil so as to allow the cane every chance for rapid growth. Whenever possible the experiments were performed in series of several plants, so as not to depend upon conclusions drawn from the results of single plants, and with each series one or more plants of the same age, similarly grown under cover but not subjected to insect attack, were planted to the open check on the experiments.

Up to the present time a total of 183 experiments have been made by one or another of the three methods mentioned above, and 17 different species of insects have been tested. As more than 45 species of insects and mites have been recorded by the laboratory as feeding upon and doing possible damage to sugar cane, it is plain that there is a large number of cane pests yet to be tested.

Of the total of 183 experiments made, the large majority (173) were with sucking insects and 10 with chewing insects.

Among the numerous plants subjected to the attack of insects that previously had fed upon mottled cane, two plants have, to date, developed the disease in a virulent form. The first to show the disease was one of a series subjected to the attack of the cane fly, *Stenocranus saccharivorus* Westw., on March 31, 1919.

The second plant to show the disease was one subjected to the attack, on April 28, of five half-grown to adult specimens of the sugar cane leaf scale, *Aclerda tokionis* Kkll., transferred from mottled cane. This plant was one of a series of four all treated in like manner, two of which died as result of the continued attack of the scale, which multiplied enormously. The fourth plant shows at the present time very suspicious signs of mottling disease. It is worth noting that two of these plants showed, on May 31, "a peculiar yellow mottling more profuse and quite unlike the mosaic disease, especially on leaves most heavily infested with scale."

It is hoped that within the next year, when the division of entomology has been relieved of the burden of the plant inspection and quarantine, and with the help of another assistant, the number of plants that may be subjected experimentally to the attack of insects that have previously fed upon mottled cane may be very greatly increased, as it is believed that only by the means of large number of tests can any definite conclusions be reached as to the ability of certain insects to transmit the disease from plant to plant. The large number of negative results from the experiments thus far made may be due, in large part, to physiological conditions of the plants resulting from their artificial environment, and these adverse conditions may in the future be overcome by improvement of methods resulting from increased experience in handling the plants under glass. Nor is there any reason to believe that some of the plants more recently subjected to insect attack may not later develop the mottling disease.

PLANT PATHOLOGICAL WORK.

Yellow stripe disease was studied principally to determine its mode of transmission. Various modes of contact between healthy and diseased plants were tried. So far the disease was positively reproduced into four healthy plants by injecting diseased juice into the lower portions of healthy cane stalks. A total of over 35 plants were used in this inoculation experiment, and all except the four mentioned above

remained free. Field observations of this disease were continually made. The nature of the cause of this disease has not as yet been determined, this will, quite possibly, be discovered when the mode of transmission will be definitely understood. This problem will be continued and the details of the work will be reported on in a separate publication. The work of eradication of yellow stripe disease at the experiment station was carried on under the supervision of the division of plant pathology and records of the distribution and occurrence of the disease are kept on file.

Outside of carrying investigations on specific problems, the division has examined diseased specimens sent in by the deputy inspectors and quarantine inspectors. The organisms which could be isolated from such material were retained in pure culture. In this way the division has on hand some economically important fungi for reference and for future work. Although this phase requires a considerable expenditure of laboratory supplies as well as time, it is nevertheless of real value in connection with the work.

AGRONOMICAL WORK.

The most important factor in the agriculture of Porto Rico this year has been the continued spread in the cane fields of the island of the yellow stripe or sugar cane mosaic disease, locally known as "matizado." It is now to be found not only in the west and center but along the entire south coast and it has recently been discovered at Naguabo on the east coast. Fully three-fourths and probably as many as four-fifths of the cane fields of Porto Rico are now more or less invaded by it. Naturally so serious an outbreak has received careful attention and in cooperation with the pathological and entomological divisions much study has been given to it and to practical methods for combating it. Many trips have been made to all parts of the island and much effort has been given to induce planters to make attempts to eradicate it. Circular No. 14, was issued in Spanish giving brief but explicit directions for its control. The response to these efforts has been very encouraging. Many centrals and colonos have taken active and intelligent measures to comply with the recommendations. In every case the results have been most gratifying. It is very difficult to absolutely stamp out an outbreak of this disease, but it is comparatively easy and inexpensive to so far control it that it no longer becomes a menace to the industry. The centrals Fajardo, Carmen, Plazuela and Aguirre are to be particularly commended for their energetic work in combating this disease and there are many others who have done equally well on a smaller scale.

Besides circular 14, five circular letters on various phases of the mosaic disease have been sent to the members of the sugar producers' association.

PUBLICATIONS.

This department in order to perform an efficient work needs to be in constant communication with the agriculturists and parties concerned in agricultural industry; and for that purpose use has been made of the daily papers, that have willingly lent their cooperation, and in addition thereto, bulletins and circulars have been published, which the daily press has also reproduced.

The experiment station has published quarterly a journal in which account is given of all the work of investigation intrusted to the different laboratories. This paper, published in English, is sent to all the experiment stations of the States, Cuba, British Antilles, and to the principal agronomic centers of Europe and South America, to British India and Dutch possessions in Asia.

Much of the research work has been published in reviews in those countries. Besides the journal, the station has published bulletins and circulars for the popularization of knowledge and to acquaint the agriculturists with the result of its work.

During the present fiscal year, numbers 3 and 4 of Volume II and numbers 1 and 2 of Volume III of the journal have been published.

Number 3 contains a very interesting work done under date of July, 1918, by the chief of the division of botany and plant pathology of the experiment station, the pathologist Mr. John A. Stevenson, entitled "A check list of Porto Rican fungi and a host index." This work is a recompilation of all that which has been published on Porto Rican fungi, with their hosts and an index of all the publications on species of this island. On describing the species mention is made of the places where they were collected and the name of the collector.

Bulletin No. 4 published in October, 1918, by Mr. R. T. Cotton, entomologist, experiment station, is entitled "Insects attacking vegetables in Porto Rico"; its purpose being to study the means of controlling these pests and of avoiding the loss caused to the horticulturist, the attack of insects being in fact one of the greatest among the various difficulties encountered in seeding and cultivating vegetables in this climate.

The author studies the life history of each of those insects, their habits and manner of attacking the plant and the injury they cause; pointing out the best means to control them.

The bulletin is illustrated with half tones representing the insect, the plants they attack and how they attack them, it being truly an interesting and useful work.

The horticultural service has published the following works: Varieties of sugar cane in Porto Rico, A cross pollination experiment, and a pineapple fertilizer (April, 1919).

Bulletin No. 18, on fertilizers, has been published by the division of chemistry. It contains a complete study of the theory that serves as the basis for the application of fertilizers to the end of having the agriculturist fully know the need of them, upon his buying them, and the fertilizing value of the material he buys as it relates to the composition of his soil.

Circular No. 14 by the division of botany and plant pathology, is on the yellow stripe disease of sugar cane and sets down rules for its eradication, containing colored plates of stalks and leaves of diseased sugar cane varieties.

Circular No. 15 by the division of chemistry is on ammonium sulphate as an insecticide. This salt has been used as a fertilizer because of the nitrogen it contains, and the experiments made seem to indicate that it is also a means of destroying the white grub that causes so much injury to the sugar cane plantations.

Circular No. 16 is an interesting study that contains conclusions and very useful information to the citrus fruit growers. It treats of citrus spots and blemishes and contains colored illustrations, which make the text more comprehensible and interesting.

In June of last year, 1918, the "Revista de Agricultura de Puerto Rico" began to be published monthly, its publication having been uninterruptedly continued. It diffuses among agriculturists the necessary information and familiarizes them with the work of the department.

The review has been kindly received by the agriculturists of the island, who have shown interest in the recommendations made by this department.

Two volumes, comprising 12 numbers, have been published, wherein the technical personnel of the department have treated of questions bearing on rural economy, plant pathology, entomology, planting, cultivation, rotation of crops, dealing with the subjects in a clear and simple form; thus furnishing information and useful data to the agriculturist. The department's plan of rural organization has been published; and encouragement has been given through suggestive articles for the promotion of industries that can be developed in the island; the cultivation of minor fruits and vegetables; and the introduction of new crops for the purpose of increasing the productive capacity of the island, inculcating into the agriculturists the idea of promoting farms, in order that they may produce, above all, to attend to the support of their families, then selling the surplus of their production to make money for the purpose of attending to all their needs.

From abroad the ministries of fomento of some of the South American Republics have requested to have the review sent to them, and analogous publications in Spain have asked for the establishment of the exchange.

This department receives the publications of the United States Department of Agriculture and of the experiment stations in the States, Cuba, British Antilles, East India, as well as the publications of the international institute of Rome, the French ministry of agriculture and the ministry of fomento of Spain and of the South American Republics.

DIVISION OF FORESTRY.

The forestry law creating the Porto Rico forest service within the department of agriculture and labor was approved as act number 22 of the ninth session of the legislature on November 22, 1917. The sum of \$6,000 was appropriated for the fiscal year beginning July 1, 1918. This was a general appropriation and as the budget for the department did not carry salaries for personnel of the forest service the appointment of a chief of the service and other necessary personnel could not be made. However, with the permission of the secretary of the United States Department of Agriculture the forest supervisor in charge of the Luquillo national forest in Porto Rico was named to act as forest inspector of the new service during the fiscal year 1919.

On May 28, 1918, some 15,000 acres of mangrove forest lands were set aside as insular forests by proclamation of the governor. These are situated about the various coasts of the island in some 20 different municipalities. The first work undertaken by the service was to make a general inspection and examination of these various mangrove forests and to prepare reports describing their present conditions and indicating in what manner they should be handled until more detailed studies necessary to the formulation of definite plans of management could be made. Examinations were

also made of a 5,000 acre tract of dry upland forest belonging to The People of Porto Rico and bordering the coast of the Caribbean Sea just east of Guinica Harbor, and also of another tract containing some 5,000 acres of mountain land situated near the town of Maricao. These examinations were made to determine the feasibility of having the lands declared insular forests. Both were found to be eminently more suited to the uses of insular forests than for any other purpose.

A number of applications for permits or contracts to undertake the exploitation of the forest growth on definite sections of various insular mangrove forests have been received and given consideration, but because of the lack of personnel necessary to make the required detailed examinations no contracts have been entered into, with the single exception of a special temporary permit for the cutting of a small amount of firewood from the Jobos mangrove forest of Guayama.

Opportunity was taken to initiate a forestry educational propaganda. The principal accomplishment along this line was the publication of the April, 1919, issue of the agricultural review as a special forestry number devoted primarily to forestry educational propaganda. Several thousand extra copies were printed for distribution and an arrangement entered into with the department of education whereby a copy will be furnished to each teacher in the island upon the opening of the 1919-20 school year.

Altogether a considerable amount of time was given to the study of the characteristics of various tree species considered desirable for forest planting and as much data as possible concerning such trees were secured. Preliminary study has also been given to the climate, soil, and other natural factors directly affecting the presence and growth of trees, and particularly as to the influence these factors might be expected to exert upon the practical results of reforestation projects.

The initial steps have been taken for the establishment of a forest experiment station and nurseries for the propagation of tree-planting stock upon the grounds of the agricultural experiment station in Rio Piedras. The inauguration of the forest experiment station is considered an event, since it marks the actual commencement of the practical reforestation movement. As this work from the outset will be under the immediate direction of a forester with technical training in nursery and planting practice, the employment of scientific methods in the selection, propagation, and planting of tree stock is assured.

THE FOREST SERVICE PROGRAM.

The budget for the fiscal year beginning July 1, 1919, carries an appropriation of \$18,400 for the forest service, including salaries of technical and nontechnical employees, travel expenses, nursery and planting work, purchase of equipment and supplies, maintenance of motor vehicles, etc. It is expected that the sums available for forestry work will be augmented to some extent from the receipts collected from the sale of forest products from the insular mangrove forests. By the terms of the forestry law all such collections are deposited in the insular treasury as a special forestry fund.

The possibility of duplication of forestry work undertaken by the Porto Rico forest service and the Federal service has been happily avoided and the closest possible cooperation between the two services assured through the appointment of the forest examiner in charge of the Federal work in Porto Rico to be forester in charge of the Porto Rico forest service. This very practical arrangement has been authorized by the legislature and the appointment approved both by the governor and by the Secretary of the United States Department of Agriculture.

SPECIFIC LINES OF FORESTRY WORK TO BE UNDERTAKEN.

1. Administration and protection of the various lands which have been or may be declared insular forests.

2. Nursery and planting. At first nurseries will be established at the forest experiment station both for experimental purposes in the selection and propagation of suitable tree species for planting and for the production of a limited amount of planting stock. As rapidly as possible it is planned to increase the output of the nurseries so as to meet the growing demand for planting stock not only for the insular forests and other public needs but for planting on private lands as well.

3. Cooperation with other departments, officers, and officials: These will include cooperative undertakings such as roadside and street tree planting, the planting of public-school grounds, parks, or other lands devoted to recreational purposes, and upon the premises surrounding various public or semipublic buildings or institutions.

4. Education, publication, and propaganda: The vital necessity of arousing the public mind and conscience to the needs of the general practice of forestry as one of the essential elements in the solution of Porto Rico's pressing economic and social

problems makes the general dissemination of forestry knowledge a work of paramount importance. It is planned to conduct a continuous educational propaganda through the publication of forestry literature and information of public interest regarding the various activities in behalf of the advancement of forestry. Not only will special publications be prepared and issued from time to time but advantage will be taken of the opportunities offered by the daily and periodic press, and in so far as possible or practicable public lectures or addresses and informal forestry talks will be given.

Realizing that the public schools constitute an arm of the greatest potential value in bringing about a universal appreciation of the importance of forestry in the daily lives of the great masses of the people every effort will be made to interest and enroll the teachers and pupils of the schools in the dissemination of fundamental forestry knowledge.

5. Cooperation with private landowners: Undoubtedly this work will become important in the development of the general reforestation program which has as its ultimate object the extension of the practice of forestry upon all lands not more valuable for general agriculture or other purposes.

6. Investigative problems and research: Numerous problems both of a theoretical and practical nature will assuredly arise as the work in scientific forestry progresses. One of the most urgent problems which has already been presented is the improvement in the method of charcoal manufacture. Charcoal is the chief fuel for domestic use in Porto Rico, the great mass of the people being almost if not quite entirely dependent upon it. There apparently has been no material change or improvement in the method of manufacture. The method employed is crude and wasteful. It is hoped to undertake an investigative study of this industry during the fiscal year 1919-20 in cooperation with the forest-products laboratory of the federal forest service.

RECOMMENDATIONS.

1. The survey of all lands declared or which may be declared insular forests should be continued and brought to as early completion as practicable, specially the survey of the insular mangrove forests, since the proper protection and the actual exploitation of several of the most valuable of these is now hampered through claims because of the lack of survey and title examination.

2. Year by year increased funds should be made available as the scope and importance of the forestry work are expanded. An appropriation of not less than \$40,000 is urgently needed for the erection of buildings and the purchase of special equipment for the forest experiment station. Much more ample funds must be provided for the nursery and planting work in order that this fundamental important part of the reforestation program may meet the demands made upon it. The personnel must necessarily be enlarged in keeping with the rapid expansion of the work in volume and variety. There will undoubtedly be necessity for the employment of additional technically trained foresters, since the problems of reforestation are essentially technical and require much scientific study. The number of forest guards now employed is altogether inadequate for the protection of the lands already declared insular forests. As new forests are added, therefore, the problem of their proper protection will be a serious one, without a material increase in the protective force.

BUREAU OF LABOR.

WORK DONE BY THE OFFICIALS OF THIS BUREAU IN CONNECTION WITH THE SCHOOL SUPERVISORS IN SOME DISTRICTS OF THE ISLAND WITH REFERENCE TO CHILD LABOR IN SUGAR CENTRALS AND CANE PLANTATIONS.

At the beginning of November our inspectors left for several school districts of the island with the aim of helping school supervisors to prosecute violations of the woman and child labor law in agricultural and allied works in order to increase the enrollment and attendance of minors at school.

This work was carried on for a period of six weeks. During this time almost all the barrios of the school districts of Fajardo, Yauco, Isabela, Juana Diaz, Añasco, Vega Baja, and Manatí were visited.

In the barrios of the Fajardo district 200 children of school age who did not attend school were found working in cane plantations, many times together with their fathers and guardians and other persons, and in many cases under the foremen whom they pointed out as guardians.

Many of the employers whom we interviewed offered us their most decided help toward the compliance with the school laws and those regulating the work of women and children, but in many cases they did not keep their word, and in one of the districts the representative of this bureau presented four indictments for violations of the above-mentioned law.

UNEMPLOYED LABORERS.

It has been impossible to find out the exact number of unemployed laborers. However, it may be asserted that the number of inactive men in each town can be figured by the hundreds.

With the exception of the cities of San Juan, Ponce, and Mayaguez, where industrial activity is notorious, but always insufficient to employ all laborers who look for work in the rest of the towns the life of the worker is quite languid on account of the lack of work, as the high cost of building materials has reduced building constructions under project 50 per cent, besides the lack of new industries and the gradual disappearance of the existing ones.

LABORERS' DWELLINGS.

The renting system of house and lot occupied by homes of laborers and which we have been reporting since 1913 still exists without any other change except an increase in rent imposed by landlords periodically without any justifiable reason.

Up to date neither the law approved March 11, 1915, providing land to laborers on certain limitations nor the law of November 27, 1917, authorizing the treasurer of Porto Rico to raise bonds to the amount of \$250,000 so that the commissioner of interior can carry out the building of homes for artisans and other laborers, has not been able to produce its effects. The problem, therefore, has not been solved.

EMPLOYMENT AGENCY.

This agency has worked this year with more difficulties than in previous years. This is due mainly to the fact that the employee in charge of it has more work now than before, and that we have had to attend to thousands of claims made by laborers who went in the expeditions of laborers to work in the States under the auspices of Federal employment agency under Mr. F. C. Roberts.

Before leaving many of these workers came to this office for information about the kind of work they were to do, climatic conditions of the places where they were to go, laws on personal security, and other similar information.

When these laborers returned, entirely disappointed, the agency which sent them there did not exist and consequently returned to our office in order that we may serve as attorneys for the thousands of claims they had to make against employers.

Many of these laborers claimed that wages had not been fully paid, others had lost their clothing, tools, etc. Many mothers, fathers, and wives wrote us in order that we might find out the whereabouts of their sons, husbands, etc., and many other similar claims.

As laborers generally do not know the difference between our employment agency and the one under Mr. Roberts's care, they think that we are the responsible ones for the failure of which they were victims, and therefore, faithless, they do not come to our agency for work as often as before.

Notwithstanding these setbacks, the results for this year have been quite satisfactory, as a total of 168 applications have been filed for different kinds of work.

Of those registered we have recommended 107 of which 76 have secured employment that is 71 per cent of those we recommended.

Another fact that also hinders the success of this agency and that will surely contribute to increase difficulties in the future is the fact that there are two other agencies in this city similar to ours: One under the direction of the Y. M. C. A. and another by the Catholic association, "Knights of Columbus."

In another place, and as No. 11, is to be found a table illustrating the work done.

INSPECTION TO CONSTRUCTION WORKS.

With reference to inspection of scaffolds and the investigation of wages the same as a general condition of workers in the building trades, 320 construction works were inspected in which 3,455 workers were directly and personally questioned, out of which 530 were bricklayers, 1,122 carpenters, 1,732 carpenter's helpers, 71 painters and the same number of plumbers and helpers.

All efforts to ascertain the exact number of workers in these trades available in each town was useless, owing to the fact that there is no official register of artisans while there is a great number of newly made and incompetent workers who provide themselves with a set of tools and daily invade construction works, hindering in many cases just recognition of the efficiency and ability of expert workers.

In the representative total above stated are to be found about 25 per cent of the invaders of industrial fields.

COST OF LIVING.

In one other place we present an illustrative table of the retail prices of foodstuffs, most commonly consumed by the working people, during the fiscal year to which this report refers, comparing them with the prices which prevailed at the end of the previous fiscal year, when the food commission existed which regulated the market prices of these articles in order to prevent profiteering.

Doubtless that since the time these prices were taken up to the time of writing this report, there will be such altering of the prices that will gradually make subsistence impossible up to the limits of the inconceivable. Our investigations in the laborer's homes could serve to treat it extensively, presenting the most horrible scenes of absolute misery caused rather than by low wages by the high cost of commodities.

Although foodstuffs only are mentioned in the table, it is also opportune to mention all other articles indispensable for ordinary life as woolen, linen and cotton goods, medicines, footwear, etc., notwithstanding the increasing importation, each day more notorious.

As a rule, laborers in the rural districts go barefooted; and for those who desire to use shoes, the high price of so necessary an article renders it prohibitive. The same happens with the homes of these laborers which lack the most essential things for the maintenance of a hygienic life, since wages to-day are 100 per cent over wages on and before April, 1899.

ECONOMIC AND SOCIAL CONDITION OF FARM LABORERS.

Coffee industry.—Owing to the great number of coffee plantations, found generally in the interior of the island where travel is difficult on account of the bad condition of roads, at times, it was impossible to visit all the plantations. However, with the aim of knowing the condition of these workers, several estates were visited in coffee districts of Barros, Ciales, Corozal, Lares, Morovis, Sábana Grande, Las Marías, Utuado, Coamo, Yauco, and San Sebastián.

At Ciales, Lares, Utuado, Las Marías, San Sebastián, Sábana Grande, Coamo, and Yauco, 50 cents is the maximum of wages received by men; 35 cents for women and 25 cents for children less than 16 years of age. At Corozal and Barros 75 cents was the average for men; women and minors a maximum of 35 cents daily.

In these districts wages are barely sufficient for one meal, and the old custom of providing free lunch to wage earners has almost disappeared, thus making life pitiful. As a rule though they are provided with all kinds of bananas at a low price, except cooking bananas (10 for 1 cent) they have to buy them from the employer and at the same place where they buy the other foodstuffs (in the cantina) and so they spend all their wages.

The social condition under which the life of these workers develops is the same as that observed by officials of this bureau six years ago. The lack of domestic hygiene is common as it is also ignorance of the need of bettering their condition. The number of illiterates is quite great and consequently they live without ambition.

The number of workers in this industry in the island is figured at about 150,000.

Tobacco industry.—In the tobacco plantations, until recently, the same conditions existed as those described when we spoke of coffee. At present, and specially in the municipalities of Aibonito, Comerío, Cayay, Gurabo, Juncos, and Caguas, where the most important plantations are to be found, wages have increased from 5 to 20 per cent, women receiving an average of 40 cents per day, men 75 cents, and children 30 cents per day. The number of farm laborers in this industry is figured around 40,000.

Sugar industry.—Cane plantations were visited, corresponding, mainly, to 24 sugar centrals, in 30 municipalities.

Laborers in this industry, except those in municipalities in the western and interior parts of the island, received an average wage of \$1 during the harvest, and 65 cents before and after the harvest. The highest wages and besides a bonus are paid in the eastern section. In these districts the average wage before and after the harvest was 90 cents. During the harvest the average was \$1, with many hundreds of workers who earned \$1.50 per day.

In the west and the greater part of the southwest, although during the harvest men earning \$1.50 and \$1.25 per day may be found, still the proportion of those who earn \$1 and even 75 cents is quite great. After the harvest the average as a rule is 75 cents per day.

According to records taken, from 50 per cent of the cane plantations there are about 150,000 workers employed in this industry during the harvest. After the harvest there is about 40 per cent unemployed.

The social condition of these workers is superior to that of their fellows in other agricultural industries. Doubtless it is due to the facility that they have of seeing life from different viewpoints, since they live around the coast and as a rule very near or within town.

Fruit industry.—Laborers in these districts mainly are found in the northern part of the island. They receive an average wage 10 per cent lower than those engaged in the cultivation and harvesting of cane. They practically live in the same conditions. The total of these workers does not exceed about 15,000 in the whole island, including those engaged in the preparation and packing of fruit for export.

The bureau has started an educational campaign on social problems, and will center its greatest efforts specially in raising the moral, social, and economic standing of laborers in the rural districts.

COMPLIANCE WITH LABOR LAWS.

According to tables on inspections made to construction works and shops, the number of towns visited can be easily noticed.

Within the city limits as well as in the rural districts, specially in the sugar zone, on account of their greater industrial activities, inspections have been very frequent with the aim of enforcing compliance with the laws under our trust.

Our records prove that there is not a town or city that has not been inspected by an official of this bureau on several occasions.

The scaffold law.—Through observations made in two-thirds of 342 construction works inspected in 34 towns, we came to the conclusion that there is not a favorable attitude on the part of employers, building constructors, and contractors toward compliance with the law on scaffolds, platforms, etc. Notwithstanding the requirements, publicity, and instructions given out by the bureau, it is necessary to order immediate repairs to all scaffolds in use, and in no few cases order suspension of work.

Four hundred and thirty scaffolds were inspected and of these 253 were suspended to be corrected according to law. The rest, 177, were approved. Only 10 constructors were indicted.

Law on claims of farm laborers for wages.—During the fiscal year which ended June 30, 1919, there were presented before several municipal courts on the island 13 complaints with reference to this law. In eight of these cases the decision favored the plaintiffs; one is pending for trial before the municipal court of Patillas, and in the rest of the cases the proof produced resulted in favor of the defendants.

The bureau of labor filed appeals in all the cases where the decision was against the plaintiffs. The district court dismissed one of these appeals; two are pending, one was filed favorably to the plaintiff having the same come to an agreement with his employer, before the arraignment for a new trial.

With this legislation, although it offers great difficulties and expenses in enforcing its compliance, the farm laborer has been greatly favored, and it is noticed that the cheating of the rural laborer's wages does not happen with the same frequency as before.

The bureau, on account of the lack of funds for travel, has not been able to appear before the courts in five complaints; but has consequently, given full instructions to the complaining laborers with respect to their rights and duties in connection with the law, and has endeavored to the aim that said legislation be known to all the interested parties, making appropriate suggestion toward the prevention of complaints.

Law on the work of women and children.—Notwithstanding the extraordinary vigilance put forth in order to obtain the cooperation of employers toward a faithful compliance with this law, it has been impossible to obtain it.

We have limited our main efforts during the last semester to new and definite instructions to all employers, requiring of them, at the same time, and in a friendly way, the correction of evident defects and the enforcement of rules that might guarantee a strict compliance with its provisions.

Cooperation was not possible and hence, against our will, judicial intervention was inevitable in 22 cases. The law has been amended lately as we suggested and will go into effect on September 20 of the present year. It is our hope to enforce it as soon as it goes into effect, to which we will devote the greatest efforts.

In the table on inspections of shops, factories, and other establishments where women and children work is to be found the total of women, the wages they receive while the law is in force fixing the minimum of wages for women and children approved August 27, last.

Law on the payment of wages in coin.—The complaints received on violations of this law have not been possible to corroborate. The laborers generally, for fear that they might lose their jobs for denouncing violators, render all efforts to correct the evil ineffective; and up to date it has been impossible to obtain sufficient evidence to bring transgressors up for trial.

The bureau has begun the free distribution of copies of a law on labor contracts now in force, and promulgated on March 31 of this year, with the aim that all acts between employers and employees be guided by the provisions of said legislation.

Workers' relief act.—This year, as several inspectors were appointed by the workmen's relief commission to work under its direction on account of the daily increase in the number of accidents in the island, inspectors of the bureau of labor only investigated 101 cases, which happened in 21 towns.

We do not specify the work realized in investigations of this kind, since the workmen's relief commission will render in its report with exact details the scope of this work.

Law on the duties of employers in cases of strike.—There has been no founded complaint against any employer for violations to the provisions of this law. The duties of employers are so easy to fulfill and they are so familiar with the requirements of the law that on all occasions when there is a strike, if they solicit workers through advertisements or through the press they make known the cause.

They generally use agents, who they instruct in such a way that they do not offer sufficient cause of action in order to be prosecuted for violations of said law.

Law on the maintenance of a dispensary, surgeon, or minor surgeon in sugar factories, shops, factories, electric and hydraulic plants.—Although in view of the law as it was approved November 30, 1917, the bureau of labor was substituted by the department of health, notwithstanding in order to cooperate to such work the officials of the bureau have investigated and reported opportunely to the department of health deficiencies found in their visit of inspection to sugar factories bound by this law.

Law on the closing of establishments (art. 553 of the Penal Code).—With the aim of protecting those employees included in section 3 of this law, as it was amended February 18, 1918, 157 drug stores, 48 restaurants and cafés, and the most important hotels of the island were inspected. Two hundred and ninety-six employees were questioned, and we succeeded in compelling employers to comply with the legal provision above mentioned. These establishments correspond to 40 municipalities.

Strikes intervened or investigated by the bureau of labor during the fiscal year which ended June 30, 1919.—During the fiscal year which ended June 30, 1919, this office intervened in 22 of the strikes that occurred in the island and of which we had any knowledge. In these industrial and agricultural paralyzations there was a total of about 14,194 strikers involved and an equal number of strikers' families who have suffered the subsequent difficulties in their living on account of the industrial stoppages.

The most important strikes were those of the cigar makers, tobacco strippers, motor-men and conductors, farm laborers, longshoremen and stevedores, carpenters, drawn-workers and embroiderers, workers in the selection and polishing of coffee.

In the sugar industry it did not have the scope of previous years. The most important strike this year was in the district of Humacao. It lasted for about two months, involving about 5,000 persons.

Those of least importance were those of shoemakers, printers, pressers, slaughterers, and employees of vermicelli and chocolate factories. There were also other strikes, although of still less importance, in public works. Practically, the greater number of them were satisfactorily settled for the workers.

Thirty-two municipalities of the island were affected by said movements. Among them mainly on account of the number of strikers were San Juan, Ponce, Caguas, Bayamon, Mayaguez, Yabucoa, Fajardo, Luquillo, Juncos, and Gurabo.

RECOMMENDATIONS.

(a) Establishment of a commission to regulate the prices of foodstuffs, clothing, and medicines of most common use.

(b) Establishment of an industrial bank in order to facilitate loans to industrial workers on small scale on long terms, and so that it may aid the development of such new industries as might be established with local capital.

(c) Establishment of trade and manual arts schools, with night classes for adults and day classes for minors, in the seven district capitals of the island.

(d) Unemployment agency with powers to promote and carry out emigration contracts under favorable conditions and under guaranty by the foreign country or State of the Union.

(e) Law making the Federal law on child labor extensive to Porto Rico.

Respectfully submitted.

M. CAMUÑAS,

Commissioner of the Department of Agriculture and Labor.

TABLE 1.—*Showing various establishments inspected during the fiscal year 1918-19 in connection with the women and children labor law.*

Location.	Number of women.	Number of shops.	Industries or shops.	Prevailing wages per day.		
Adjuntas	1	1	Dressmaking shops.....	\$0.33		
Aguadilla	2	2	do	1.50	\$1.00	
Agua Buena	1	1	do	.33		
Arecibo	54	2	do	.66	.50	\$2.33
Barceloneta	5	1	do			
Bayamon	24	14	do	1.00	.83	.80
Caguas	87	87	do	.63	.60	.72
Cataño	5	3	do	1.33	.66	.80
Cayey	13	5	do	.50	.33	.25
Ciales	1	1	do	.50		
Cidra	1	3	do	.50	.33	.30
Coamo	25	2	do	.66		
Comerio	16	6	do	.50	.41	
Dorado	1	1	do	.66		
Fajardo	1	1	do	.50		
Guayama	18	5	do	.66	.50	.31
Humacao	53	25	do	1.75	1.00	.25
Juana Diaz	17	1	do			
Juncos	13	8	do	.66	.50	.29
Manati	5	4	do	1.00	.41	.33
Manabo	1	1	do	.50		
Mayaguez	22	1	do			
Naguabo	15	6	do	2.00	1.00	.33
Ponce	21	4	do	1.00	.83	.41
Rio Piedras	10	6	do	1.33	.66	.16
San Juan	216	44	do	1.33	1.00	.50
San Lorenzo	1	1	do	.66		
Toa Baja	7	1	do	.75		
Trujillo Alto	1	1	do	.83		
Vega Baja	7	7	do	.66	.33	
Yabucoa	1	1	do	.66		
Yauco	15	1	do	.40	.28	.16
Guayama	1	1	Laundries	1.00		
Mayaguez	1	1	do	.33		
Rio Piedras	2	1	do	.50		
San Juan	60	18	do	2.00	1.16	.33
Yauco	1	1	do	.50		
Mayaguez	261	5	Drawnwork and embroidery shops	1.50	.80	.25
Ponce	220	9	do	1.50	.83	.20
Salinas	11	1	do	.25	.20	.15
Santa Isabel	6	1	do	.25		
Utado	39	2	do			
Adjuntas	32	2	Polishing and selecting coffee mills	.40	.30	.25
Aguadilla	80	1	do	.35	.25	.30
Arecibo	61	2	do	.75	.60	.43
Ciales	39	1	do	.25		
Coamo	39	1	do	.38	.31	.33
Lares		4	do			
Mayaguez		3	do			
Ponce	292	4	do	1.20	.60	.20
San Sebastian	12	2	do	.35	.30	.20
Yauco	82	2	do	.35	.30	
Agua Buena	38	1	Stripping shops	.70	.50	
Arecibo	464	8	do	.75	.50	.25
Barceloneta	42	1	do	.55	.50	.40
Bayamon		1	do			
Caguas	2,082	17	do	1.20	.83	.50
Cataño	208	1	do	.66	.58	.41
Cayey	302	1	do	.80	.60	.30
Ciales	54	2	do	.75	.66	.41
Cidra	50	1	do	.50		
Gurabo	136	2	do	.75	.60	.45
Isabela	61	2	do	.40	.34	.65

¹ At Barceloneta there is a dressmaking shop where all workers belong to the family and work for self profit and not wages.

² At Humacao there is a dressmaking shop where 2 apprentice girls work without wages.

³ At Juana Diaz there is a dressmaking shop. The employees work at home under contract.

⁴ At Mayaguez there is a dressmaking shop. Types of wages were not obtained because the owner was absent on the day of inspection.

⁵ At San Juan there are 3 dressmaking shops where 6 girls work. Four of these girls do not receive pay and 2 of them receive \$0.25 per day.

⁶ At Utado there are 2 drawnwork and embroidery shops, where 39 women work as apprentices without receiving wages.

⁷ At Lares there are 4 polishing and selecting coffee mills, but they were closed on the day of inspection.

⁸ At Mayaguez there are 3 polishing and selecting coffee mills, but they were closed on the day of inspection.

⁹ At Bayamon 1 of the stripping shops was closed on the day of inspection.

TABLE 1.—*Showing various establishments inspected during the fiscal year 1918-19 in connection with the women and children labor law—Continued.*

Location.	Number of women.	Number of shops.	Industries or shops.	Prevailing wages per day.		
Juncos.....	70	3	Stripping shops.....	\$1.25	\$0.66	\$0.40
Manati.....	338	10	do.....	.70	.50	.30
Mayaguez.....	101	1	do.....	.60	.40	
Pedueñas.....	72	1	do.....	.47	.35	.25
Ponce.....	683	3	do.....	.80	.54	.20
Rio Piedras.....	86	1	do.....	.66	.60	.53
San Juan.....	1,026	4	do.....	1.00	.75	.50
San Lorenzo.....	144	3	do.....	.85	.58	.33
Toa Alta.....	46	1	do.....	.75	.60	.50
Utua.....	258	2	do.....	.50	.40	.24
Vega Baja.....	292	6	do.....	.82	.60	.40
Yauco.....	27	2	do.....	.45	.35	.20
Total.....	8,495	333				

TABLE 2.—*Showing the prevailing prices of foodstuffs between June, 1918, and June, 1919.¹*

Articles. ²	According to regulations adopted by the food commission.		According to investigations made by the bureau of labor.			
	Prices in June, 1918.	Unit.	Prices in June, 1919.			Unit.
Rice, first class.....	\$0.109	Pound.....	\$0.14	\$0.13	\$0.125	Pound.
Rice, second class.....	.099	do.....	.12	.11	.10	Do.
Rice, third class.....	.090	do.....	.11	.10	.09	Do.
Sugar, first class.....	.076	do.....				
Sugar, second class.....	.064	do.....	.10	.09	.08	Do.
Sugar, third class.....	.060	do.....	.08	.07	.06	Do.
Cod fish.....			.20	.18	.17	Do.
Coffee, first class.....			.36	.34	.32	Do.
Coffee, second class.....			.30	.28	.24	Do.
Beans (white).....	.139	Pound.....	.18	.14	.12	Do.
Beans (red).....	.143	do.....	.18	.14	.12	Do.
Flour.....	.085	do.....	.16	.10	.08	Do.
Corn meal.....	.067	do.....	.07	.06	.05	Do.
Ham.....	.361	do.....	.48	.40	.35	Do.
Lard (pure).....	.357	do.....	.44	.40	.36	Do.
Lard (compound).....			.32	.30	.28	Do.
Bacon.....			.36	.35	.32	Do.
Bread.....	.110	Pound.....	.12	.11	.10	Do.
Milk (fresh).....	.110	Liter.....	.14	.12	.10	Liter.
Milk (condensed).....	.180	Can.....	.25	.23	.22	Can.
Potatoes (Irish).....	.053	Pound.....	.08	.06	.05	Pound.
Corn.....	.056	do.....	.08	.07	.06	Do.
Potatoes (sweet).....	.026	do.....	.04	.03	.025	Do.
Beef.....			.22	.21	.19	Do.
Meat (swine).....			.25	.24	.23	Do.
Onions.....	.086	Pound.....	.20	.18	.17	Do.
Bananas.....	.549	Hundred.....	.75	.50	.45	Hundred.
Gardules.....	.073	Pound.....	.12	.10	.08	Pound.
Peas.....	.083	do.....	.10	.09		Do.
Eggs.....	.403	Dozen.....	.60	.48	.36	Dozen.
Yams.....	.035	Pound.....	.04	.03	.02	Pound.
Bananas (cooking).....	2.58	Hundred.....	.04	.03	.02	One.
Yautías.....	.034	Pound.....	.04	.03	.0225	Pound.

¹ Data in the above table have been taken note of at the retail establishments mostly patronized by laborers' families.

² Cod fish, coffee, bacon, meats, and beef, were not regulated by the food commission. These articles are the most commonly consumed as food by the laboring classes.

TABLE 3.—Showing the tobacco factories and shops inspected during the fiscal year 1918-19.

Location.	Number of shops.	Number of workers.	Types of prevailing wages.			
			\$0.58	\$0.33	\$0.29	.....
Adjuntas.....	1	7	\$0.58	\$0.33	\$0.29	.....
Aguada.....	2	5	.90	.50	.45	\$0.35
Aguadilla.....	7	44	1.08	.83	.70	.50
Aguas Buenas.....	2	303	2.25	1.80	1.60	1.30
Arecibo.....	4	38	1.40	1.00	.70	.50
Barros.....	2	4	.75	.....	.....	.....
Bayamon.....	19	962	3.50	2.50	1.50	.40
Cabo Rojo.....	5	25	.75	.60	.40	.30
Caguas.....	6	86	2.50	1.50	1.00	.50
Camuy.....	2	6	.60	.40	.....	.....
Cayey.....	4	279	2.50	2.00	1.50	.50
Celba.....	1	3	1.25	1.00	.....	.....
Ciales.....	1	17	1.66	1.50	1.33	.....
Cidra.....	1	18	1.50	1.25	.....	.....
Coamo.....	2	10	.83	.50	.....	.....
Comerio.....	2	6	.83	.50	.....	.....
Corozal.....	1	2	1.00	.....	.....	.....
Dorado.....	2	5	1.16	1.00	.90	.53
Fajardo.....	7	21	1.50	1.00	.80	.60
Guanica.....	2	7	1.20	1.00	.80	.....
Guayama.....	8	64	1.25	1.00	.90	.50
Guayanilla.....	1	3	.75	.50	.40	.....
Gurabo.....	3	63	1.50	1.16	.90	.....
Humacao.....	11	48	1.75	1.50	1.25	.75
Juana Diaz.....	3	4	.90	.40	.....	.....
Juncos.....	8	30	1.33	.90	.83	.....
Loiza.....	1	5	1.00	.....	.....	.....
Manati.....	7	23	.50	.40	.30	.....
Maunabo.....	4	7	1.50	1.20	1.00	.80
Mayaguez.....	10	263	2.50	2.00	1.00	.50
Moca.....	1	2	.50	.20	.....	.....
Morovis.....	1	7	1.66	1.50	.....	.....
Naguabo.....	9	23	1.80	1.20	1.00	.60
Naranjito.....	3	4	1.50	1.00	.....	.....
Patillas.....	4	18	1.50	1.19	.....	.....
Penuelas.....	2	85	2.40	1.50	1.16	.50
Ponce.....	16	426	3.50	2.50	1.50	.40
Rincon.....	2	20	1.15	.95	.70	.50
Rio Grande.....	4	6	1.50	1.35	1.16	.....
Rio Piedras.....	7	29	1.33	.80	.70	.50
Sabana Grande.....	1	18	1.50	1.20	1.00	.80
Salinas.....	1	2	.60	.....	.....	.....
San German.....	1	1	.83	.....	.....	.....
San Juan.....	10	992	3.50	3.00	2.00	1.00
San Lorenzo.....	8	326	2.60	2.00	1.20	.50
Tos Alta.....	2	7	1.16	1.00	.....	.....
Tos Baja.....	2	5	1.00	.90	.83	.....
Trujillo Alto.....	1	2	1.00	.....	.....	.....
Utado.....	2	256	3.50	2.50	2.00	1.00
Vega Alta.....	6	22	1.33	1.16	1.10	.....
Vega Baja.....	6	21	1.30	1.00	.90	.33
Vieques.....	5	13	1.33	1.25	1.16	1.00
Yabucoa.....	6	15	1.25	1.00	.87	.70
Yauco.....	9	107	1.16	.83	.75	.60
Total.....	238	4,775	.....	.....	.....	.....

TABLE 4.—Statistical data of the free employment agency during fiscal year ended June 30, 1919.

Month.	Applicants.	Applicants recommended.	Applicants employed.	Applicants recommended who did not report.
1918.				
July.....	12	8	4	.....
August.....	21	10	2	4
September.....	8	2	2	.....
October.....	7	5	2	3
November.....	8	6	4	2
December.....	1	.....	.....	.....
Total.....	57	31	14	9
1919.				
January.....	7	5	3	2
February.....	16	10	8	2
March.....	16	19	6	3
April.....	23	18	15	2
May.....	30	14	12	2
June.....	19	10	8	3
Total.....	111	76	52	14

UNEMPLOYED APPLICANTS AVAILABLE FOR DIFFERENT OCCUPATIONS.

Occupation.	Applicants.	Occupation.	Applicants.
Attendants.....	4	Mechanics.....	3
Bakers.....	1	Messengers.....	15
Blacksmith.....	1	Minor surgeons.....	3
Bookkeepers.....	5	Nurses.....	1
Bricklayers.....	1	Shoemakers.....	1
Cartmen.....	2	Painters.....	1
Carpenters.....	14	Servants (male).....	13
Chauffeurs.....	2	Servants (female).....	11
Clerks.....	23	Stenographers.....	1
Commission merchant.....	8	Store clerks (male).....	14
Cook (male).....	3	Store clerks (female).....	11
Cook (female).....	8	Washerwomen.....	4
Dressmakers.....	4	Veterinary surgeons.....	1
Firemen.....	2		
Foremen.....	3	Total registered.....	106
Helpers (auxiliaries).....	8		

TABLE 5.—Showing work done and results obtained in cases of claims made by workers for wages not paid, from July 1, 1918, to June 30, 1919.¹

Occupation.	Claimants.	Address.	Claimed.	Settled.	Unsettled.	Pending.
Piano tuners.....	3	San Juan.....	\$80.00	2	1	.....
Carpenters.....	11	do.....	356.15	4	4	3
Do.....	1	Catano.....	42.50	1	.....	.....
Do.....	1	Anasco.....	31.10	1	.....	.....
Common laborers.....	30	San Juan.....	175.88	14	5	11
Do.....	1	Loiza.....	16.20	.....	1	.....
Do.....	1	Rio Piedras.....	1.50	.....	1	.....
Do.....	1	Caguas.....	9.00	.....	1	.....
Do.....	1	Bayamon.....	3.00	.....	1	.....
Do.....	1	Gurabo.....	3.25	.....	1	.....
Plumbers.....	3	San Juan.....	38.10	2	1	.....
Male servants.....	18	do.....	91.00	12	3	3
Drawn workers.....	2	do.....	5.50	.....	2	.....
Clerks.....	4	do.....	131.00	1	3	.....
Fin Smiths.....	1	do.....	10.00	1	.....	.....
Foremen.....	2	do.....	105.00	1	1	.....
Washerwoman.....	12	do.....	86.14	6	5	1
Chauffeurs.....	5	do.....	181.50	1	4	.....
Do.....	1	Ponce.....	31.50	.....	1	.....
Salesmen.....	2	San Juan.....	230.84	.....	1	.....
Mechanics.....	3	do.....	58.50	2	1	.....
Watchmen.....	2	do.....	14.80	2	.....	.....
Housemaids.....	3	do.....	14.00	2	.....	1
Do.....	1	Bayamon.....	4.00	1	.....	.....
Cooks.....	1	San Juan.....	3.52	1	.....	.....
Child nurses.....	1	do.....	5.00	1	.....	.....
Fressers.....	2	do.....	10.62	2	.....	.....
Conductors (train).....	1	Bayamon.....	15.00	.....	1	.....
Farmers.....	1	Rio Piedras.....	8.00	1	.....	.....
Trained nurses.....	1	San Juan.....	15.45	1	.....	.....
Brick masons.....	2	do.....	72.50	1	1	.....
Hoopers.....	1	do.....	10.50	.....	1	.....
Photographers.....	1	do.....	5.00	.....	1	.....
Stage artists.....	2	do.....	84.00	2	.....	.....
Musicians.....	1	do.....	3.50	1	.....	.....
Painters.....	4	do.....	24.75	1	3	.....
Shoemakers.....	1	do.....	2.50	.....	.....	1
Total.....	129	.....	1,900.80	64	44	21

¹ There were several cases in which it was necessary to hold meetings in the office and to make personal inspection of the work in controversy.

Data collected by officials of the Bureau of Labor at factories and shops while making investigations in regard to labor laws during fiscal year 1918-19.

INSPECTION WORK.

Factories or shops.	Municipalities.	Establishments.	Employees.		Prevailing wages per day.		
			Men.	Women.	Men.	Women.	
Dressmaking shops.....	32	197	.....	683	.....	.....	.....
Tailor shops.....	32	110	151	1	\$2.50	\$1.66	\$0.33
Hat-repairing shops.....	32	74	87	.....	4.16	1.66	.50
Barber shops.....	62	354	452	.....	3.33	1.33	.40
Shoemaking shops.....	62	409	749	.....	3.50	1.16	.33
Bakeries.....	60	135	888	.....	3.37	2.00	.32
Printing shops.....	14	46	361	.....	3.60	2.00	.16
Laundries.....	12	44	75	65	3.00	1.16	.20
Tobacco factories.....	54	238	5,923	1,886	8.00	3.50	.30
Lace work and embroidery shops.....	5	18	.....	537	.....	.....	.....
Tobacco stripping shops.....	26	78	692	6,580	3.00	2.00	.50
Coffee-selecting shops.....	8	22	100	647	2.50	1.83	.60
Hat factories.....	3	5	69	63	3.14	2.00	.50
Bay-rum factories.....	5	9	15	8	1.66	1.33	.60
Blacksmith shops.....	22	48	256	.....	3.00	2.50	.33
Belt-making shops.....	9	15	29	.....	2.75	1.16	.50
Corn mills.....	9	11	17	.....	1.50	1.00	.35
Tinsmith shops.....	7	19	30	.....	3.00	2.00	.66
Confectioneries.....	25	49	110	.....	4.16	2.50	.33

¹ Four coffee-selecting shops were closed on day of inspection.

Data collected by officials of the Bureau of Labor at factories and shops while making investigations in regard to labor laws during fiscal year 1918-19—Continued.

INSPECTION WORK—Continued.

Factories or shops.	Municipalities.	Establishments.	Employees.		Prevailing wages per day.					
			Men.	Women.	Men.			Women.		
Watch-repairing shops and silversmith shops.	19	53	70	.....	\$5.00	\$3.00	\$0.50	.....	.....	.....
Soda-water factories.	14	19	82	6	2.50	1.33	.40	\$0.40	\$0.35	\$0.30
Ice factories.	13	17	79	.....	3.83	2.00	.33	.....	.....	.....
Electric plants.	12	12	74	.....	4.16	2.83	.50	.....	.....	.....
Basket-making shops.	2	2	3	.....	1.66	1.50	1.16	.....	.....	.....
Box factories.	1	1	10	.....	2.50	1.25	1.00	.....	.....	.....
Tobacco selecting shops.	6	10	604	1,258	2.16	1.33	.50	1.00	.75	.50
Knitting shops.	1	1	.....	12	.....	.....	.....	.18	.15	.10
Soap factories.	1	1	2	.....	.50	.....	.....	.....	.....	.....
Preparation of fruits for exportation.	2	2	5	7	1.50	.70	.....	.45	.25	.....
Perfumery and medicine factories.	3	4	16	10	2.00	1.16	.60	.58	.50	.....
Coffee drying.	1	1	2	.....	1.66	1.16	.....	.....	.....	.....
Book-binding shops.	3	3	3	.....	1.33	1.00	.33	.....	.....	.....
Trunk factories.	5	7	10	.....	1.66	1.00	.50	.....	.....	.....
Coffee mills.	6	24	15	.....	2.00	1.50	.40	.....	.....	.....
Cane mills.	6	6	46	.....	2.00	1.00	.50	.....	.....	.....
Sculpture shops.	4	5	8	.....	3.00	1.66	.83	.....	.....	.....
Machine shops.	6	9	124	.....	3.25	1.75	.50	.....	.....	.....
Cabinetmaking shops.	5	11	17	.....	6.00	2.50	.83	.....	.....	.....
Cooper shops.	1	1	1	.....	1.33	.....	.....	.....	.....	.....
Curtain-making factories.	1	1	1	4	1.50	.....	.....	.....	.70	.25
Straw article factories.	1	1	1	.....	.....	.....	.....	.....	.....	.....
Vermicelli factories.	6	6	35	69	2.00	1.00	.40	.60	.50	.40
Bootblack stands.	2	15	42	.....	2.00	.40	.30	.....	.....	.....
Wheelwright shops.	2	2	2	.....	1.16	.50	.....	.....	.....	.....
Roller-cake factories.	2	2	10	.....	.66	.60	.....	.....	.....	.....
Chocolate factories.	2	3	17	5	2.50	1.16	.50	.40	.33	.....
Hosiery factories.	1	1	1	4	.....	.....	.....	.25	.....	.....
Lumber mills.	1	1	8	.....	1.83	1.25	.....	.....	.....	.....
Garlic selecting shops.	1	1	.....	2	.....	.....	.....	.....	.....	.....
Bed spring-mattress factories.	3	3	14	.....	1.50	1.00	.50	.....	.....	.....
Tile (mosaic) factories.	2	3	25	.....	2.33	1.50	.50	.....	.....	.....
Diamond-cutting shops.	1	1	20	.....	1.66	.83	.....	.....	.....	.....
Vinegar factories.	2	2	4	.....	.50	.40	.....	.....	.....	.....
Candy factories.	1	1	2	.....	1.25	.75	.....	.....	.....	.....
Brick factories.	1	1	6	.....	.83	.....	.....	.....	.....	.....
Rubber-stamp factories.	1	2	2	.....	2.00	1.00	.....	.....	.....	.....
Shirt-making factories.	1	1	1	.....	2.50	.....	.....	.....	.....	.....
Slipper factories.	1	2	.....	12	.....	.....	.....	.41	.33	.29
Silk mills.	1	2	2	8	1.00	.50	.....	.50	.40	.....
Looking-glass repairing shops.	1	1	1	.....	1.16	.....	.....	.....	.....	.....
Undershirt factories.	1	1	3	26	1.25	.41	.....	.60	.50	.40
Quilt factories.	1	1	2	4	1.50	1.25	.60	.....	.....	.....
Vulcanization shops.	1	1	1	.....	2.00	.....	.....	.....	.....	.....
Suit-case factories.	1	2	24	14	2.00	1.50	.83	1.33	.75	.66
Syrup factories.	1	1	2	.....	.33	.....	.....	.....	.....	.....
Fertilizer factories.	1	2	54	.....	1.62	.72	.....	.....	.....	.....
Chemical acid factories.	1	1	5	.....	1.41	1.18	.....	.....	.....	.....
Refreshment stands.	1	8	37	2	2.00	1.50	.33	.83	.....	.....
Foundries.	2	4	100	.....	13.00	5.00	1.00	.....	.....	.....
Tobacco-drying shops.	2	2	7	19	1.66	1.16	.75	.70	.66	.60
Stone quarries.	1	1	27	.....	2.00	1.25	.80	.....	.....	.....
Tanneries.	1	1	19	1	1.92	1.33	1.00	.70	.....	.....
Cotton gins.	1	1	11	13	2.00	1.25	.60	.60	.....	.....
Breweries.	1	1	39	.....	5.83	2.66	.50	.....	.....	.....
Bean selection.	1	2	4	54	1.33	.60	.....	.30	.....	.....
Chewing tobacco manufacturing.	1	1	5	8	.65	.....	.....	.45	.35	.....
Sugar factories.	24	25	5,025	18	13.88	2.00	.40	.75	.60	.50
Cigarette factories.	1	2	82	78	7.33	1.66	1.25	1.33	1.00	.50
Total	.....	2,179	16,816	12,084	.....	.....	.....	.....	.....	.....

1 There are at San Juan City 18 coffee-grinding and retail establishments; 9 of them are managed and operated by their owners.

APPENDIX X.

REPORT OF THE FOOD COMMISSION.

SAN JUAN, P. R., *August 1, 1919.*

The honorable the GOVERNOR OF PORTO RICO,
San Juan, P. R.

SIR: On August 1, 1918, we had the honor of transmitting to you our report for the first year of our activities, and in closing our work we now bring herein before you such matters as comprise the balance of our work in this the

FINAL REPORT OF THE PORTO RICO FOOD COMMISSION.

It has been thought proper to include in our financial statement a final accounting of all transactions, so that the accompanying accounts cover the entire period of the activities of this commission, from May 5, 1917, to July 15, 1919, and the final statement of assets that the food commission has turned over to The People of Porto Rico.

As our first annual report was rather exhaustive we will endeavor to make this final report as brief as circumstances will permit, avoiding a repetition of matters dealt with in the former report and mentioning only the activities of the commission during the last 14 months of its existence.

The food commission relaxed its enforcement and regulation immediately upon the signing of the armistice on November 11, 1918; yet a certain control was continued for several months, especially in the regulation of milk prices, until the increased production in the spring of 1919 warranted the lifting of restrictions; so that on May 5, 1919, on the date of the second anniversary of its existence, the last of the restrictive measures were repealed.

It had been the intention of the food commission to withdraw from all commercial activities when the rice crop of 1918-19 was started, but the difficulties attendant on the harvesting and marketing of this crop in the southern states, to which reference is made elsewhere in this report, and the influenza epidemic which began here at about the time of the signing of the armistice, forced the commission to provide rice for the island at any cost.

The condition in which a great part of this rice was shipped caused a heavy loss, which is being claimed from the shippers by the Food Administration Grain Corporation, a Federal organization, under an award of a Federal board of arbitration, which places the responsibility for the damage and loss on the shippers of the rice. Further reference to this claim will be made.

It is satisfactory, however, to state that the food commission has been able to pay all its expenses for the two years and more that it has been active and that it still yields a large sum to the government.

REGULATION.

In August, 1918, the shortage of rice, which later became so acute, began to be felt, and it was found advisable not only to fix the wholesale and retail prices, but to request the public to reduce consumption until October 10, when it was thought that the new crop rice would be available. This was done by resolution No. 43 on August 23, 1918. The retail prices for the three grades which the food commission had standardized were fixed at 10, 11, and 12 cents per pound, respectively, and the wholesale prices 1 cent per pound below the above.

On September 3, 1918, by resolution No. 45 "wheatless days" were abolished; and resolutions Nos. 16, 28, 32, and 37, dealing with the subject, were repealed.

On the same day by resolution No. 44 "meatless days" were ended by the repeal of resolution No. 15.

On September 11, 1918, resolution No. 46 fixed the prices established by the municipal boards in accordance with the act of December 3, 1917, as prices approved by the food commission for penal effect in case of violation; provided the municipalities so stated in their ordinances and the approval of the food commission was obtained.

On September 18, 1918, by resolution No. 47 an amendment to resolution No. 42 was approved relative to the form of guaranty for certified milk.

On October 17, 1918, resolution No. 48 was adopted regulating the sale of gasoline and fixing the prices at which it should be sold. A price of 43 cents per gallon was

established for the sale of gasoline in drums to dealers and 47 cents for sales by dealers to consumers in bulk. The sale of gasoline in cases was fixed at \$5 per case of 10 gallons in sales to dealers and \$5.25 in sales to consumers. These prices were to take effect from October 25, 1918. This resolution was later repealed on November 11, 1918, by resolution No. 49, as an arrangement had been made with the largest oil dealers to maintain the prices which were in effect on October 16, 1918, for 30 days.

The prices for the sugar crop of 1918-19 having been fixed by agreement on the mainland it was thought advisable on December 9, 1918, to fix the retail prices for Porto Rico. This was done by resolution No. 50, the prices being 7 cents, 8½ cents, 9 cents, and 10 cents per pound according to grade and quality.

On January 20, 1919, resolution No. 51 was adopted repealing resolutions Nos. 1, 21, 35, and 46. By this resolution shipping restrictions were withdrawn, as well as those regarding the killing of female cattle, and the requirement of posting prices by merchants; and while it was decided to rapidly cancel all other restrictions, with the exception of those relating to the sale of milk, which it was thought best to maintain until increased production allowed of their removal without undue prejudice to the public, yet an increase in the selling price of milk in San Juan to 16 cents per quart was provided by resolution No. 52 on the same date.

On January 27, 1919, by resolution No. 53, restrictions for the sale of bread, fish, and rice were removed by the repeal of resolutions Nos. 10, 24, 30, 34, and 43.

On February 10, 1919, the regulations governing the sale of sugar were repealed by resolution No. 54, which canceled resolutions Nos. 29 and 50; and, finally, on May 5, 1919, all restrictions were removed by the repeal of the regulations governing the sale of milk, etc. Thus, by resolution No. 55, the cancellation of resolutions Nos. 19, 22, 23, 25, 36, 42, 47, and 52 was ordered and the activities of the food commission were concentrated on the liquidation of its affairs in the most rapid manner.

RICE.

Even prior to the sinking of the steamship *Carolina* and the possible consequences of the enemy submarine raids off the Atlantic coast, it was seen that there would be a serious shortage of rice on the island before the new crop rice would be available. Normally, new rice begins to arrive early in October, although some small lots usually reach Porto Rico in September; so that the stock of rice reported as on hand on June 5, 1918, amounting, roughly, to some 187,300 pockets in the hands of wholesalers, and 25,000 pockets in the warehouses of the food commission, gave a total stock of 212,300 pockets which, with subsequent estimated arrivals, would barely carry the island to the next crop. The food commission, therefore, purchased about 59,000 pockets of rice and thus expected to assure a sufficient supply until September.

This estimate was based on normal conditions prevailing when the new crop rice was available; but it left the island without visible supplies for a month, during which time it was hoped that rice held by retailers would be the source of supply until the wholesalers could receive new crop rice.

The food commission endeavored to purchase larger quantities in June, but was unable to obtain any more to arrive within the period of the expected shortage.

By the middle of August the stock of rice for sale was estimated at not more than 100,000 pockets—or barely a month's supply—and the situation was becoming serious as no rice was available on the continent, and receipts of Asiatic rice there, had been curtailed by the War Trade Board.

Retail prices on the island had been unlawfully increased, and the resolution fixing prices was being violated generally; but it was difficult to secure convictions, in spite of the many investigations carried out, as many consumers connived with the sellers in order to secure a supply, even at the higher prices.

A case at Patillas, however, was reported, of a retailer selling rice at 1 cent per pound over the lawful price. This retailer proved in court that he had paid the wholesaler more than he was charging for the rice at retail, and, upon further investigations, the wholesaler was found to be within the Federal regulation. Rice was being introduced from the port of New York and even from Santo Domingo, at a greatly increased cost, owing to a duplication of freight and other charges. The commission felt that it could not encourage such importations which would merely tend to raise prices and could not relieve the situation to any great extent.

At the same town of Patillas, retailers forced to sell rice at less than the wholesalers sold to them, finally decided to refuse to sell any rice until the food commission increased the prices at which it might be sold, since the wholesalers obliged retailers to pay the price fixed for retail sales, and not only were they retailing at original cost but were losing transportation and other expenses.

The food commission held that, until a new price was fixed, a retailer who paid a price for rice, that yielded a loss, was deliberately purchasing goods to sell same below cost.

The mayor of Patillas was thereupon made an agent of the food commission and ordered to take over all stocks of rice held by merchants in his town, to give receipts for these quantities, instruct the merchants to claim the value of the rice from the food commission, and to offer the rice for sale, at retail, within the scale of prices fixed by the commission.

At a meeting held by the mayor with the retailers, the latter agreed to sell their stocks at the legal prices, and the incident was closed.

The food commission later increased the retail prices 1 cent per pound and at the same time fixed the wholesale price at 1 cent below these retail prices, in order to give the retailers some measure of protection. The public was at the same time requested to reduce consumption 50 per cent until October 10, 1918, when it was expected that the new crop rice would be available.

Meanwhile, the details of the contract signed by the United States Food Administration with the rice millers on the mainland became known and it was seen that, during the new crop, the prices would be practically fixed; although the lack of old stocks on the mainland had created such a demand for local consumption, that all rice milled was immediately absorbed and there was none offering for shipment.

An unprecedentedly rainy season delayed the harvesting and damaged the quality of the rice, and the orders placed by the dealers in Porto Rico, as well as by the food commission, remained unfilled. The situation became worse due to insufficient transportation facilities from New Orleans. Rice shipments from Seattle and San Francisco for the food commission were held at New Orleans for months, just at a time when the rice was most needed in Porto Rico.

By the end of October, 1918, rice stocks began to be exhausted in Porto Rico, and first one town, then another, reported no rice offering for sale.

At about the same time, it became known that the United States Food Administration had requisitioned 75 per cent of the output of the rice mills on the mainland for military and relief purposes, and the food commission then appealed to the Federal food administrator for Porto Rico for assistance in securing supplies for this island.

Upon an appeal from Mr. Lee to Mr. Hoover the latter ordered that sufficient rice, as requested, be set aside by the Food Administration from the rice it had requisitioned, to be shipped to the Porto Rico food administration in three monthly shipments of 50,000 pockets each, in November, December, and January; and the food commission, on this account, opened a credit in New Orleans for \$500,000 in favor of the Grain Corporation, to finance the first shipment.

It was found that the receipts of rice in Porto Rico during the months of September and October had only been 37,745 pockets as against 153,365 pockets in the same months of 1917.

In addition to the rice to be shipped by the Grain Corporation, the food commission still had some Asiatic rice in transit, and a further credit of \$50,000 had been opened in favor of a rice broker in New Orleans to cover such purchase as he might be able to make for the food commission.

Lack of tonnage delayed all shipments of rice, and the Federal Food Administrator was again appealed to to relieve the situation. After energetic action, and with the cooperation of Mr. C. P. Doe, chief of operations of the Shipping Board, a ship was assigned to move the first shipment of rice for the food commission. A special steamer had been requested, in order not to interfere with regular shipments for the trade, since amounts purchased by the food commission would barely be enough to supply one half of the requirements of the island, and it was expected that, in addition to the regular amount for consumption, at least 100,000 pockets would be necessary to stock up stores, as the market was completely bare of supplies.

The receipts of rice for October and November, 1918, were only 65,283 pockets, against 306,235 pockets in the same period of 1917; so that during four months (August to November, inclusive) receipts of rice had been 29.45 per cent of what they were in the same period of 1917; and for the months of October and November, 1918, only 21.45 per cent of what they were in the same two months of 1917. These receipts had passed into consumption as fast as the shipments arrived.

The situation in Porto Rico became still more acute owing to the influenza epidemic which, unhappily, devastated the island at about this time, and the finance committees of the house of representatives and the senate of Porto Rico called upon the food commission to exert its efforts to bring relief.

The president of the food commission was able to show that it had foreseen this situation and done everything in its power to avert it; but that circumstances in the North were such that, so far, in spite of large purchases of rice made, it had been impossible to transport it to Porto Rico. The rains in the Southern States, the heavy local demand, the Government's requisitions and the partial paralyzing of milling, due to the influenza epidemic raging in the Southern States, aggravated by inadequate transportation facilities, combined to delay relief here.

In fact the food commission had placed funds in the United States aggregating over \$600,000 for rice purchases which did not come forward for over a month after the money was cabled, in addition to opening local credits for \$500,000 more.

Over 4,000 large bags of Saigon and Rangoon rice shipped from the Pacific coast and purchased and paid for in June and July, were not received until December and January, or six months later.

The steamer assigned for the shipment of our rice was diverted to other uses, and upon a very energetic protest by the Federal food administrator, space was allotted on other ships which brought the first supplies about the middle of December. But this rice passed so rapidly into consumption that the market was bare until heavier shipments began to arrive in January, after which, conditions changed to the other extreme.

Although stocks were large after January, and receipts continued heavy until March, it was found that the conditions prevailing in the rice belt of the Southern States during the harvesting and milling of the rice, had damaged the grain very materially. It was a new and costly experience to all concerned. Rice was found to contain as high as 20 per cent moisture, when, normally, this content had been between 11 per cent and 12 per cent. This excessive moisture caused fermentation with consequent heating and discoloration of the rice. The depreciation, therefore, was heavy.

The food commission itself found that, on the last two cargoes of rice received from the Food Administration Grain Corporation, a large percentage arrived in the condition described above, and, upon submitting the matter to a board of arbitration, appointed by the Federal food administrator under the United States Food Administration rules, it obtained an award against the shippers, fixing the damage at over \$117,000, the claim for which is still being pressed and all documentary proof for which has been turned over to the treasurer of Porto Rico with the other assets of this commission.

During the difficult situation, when rice was unobtainable, a conference was held with the trade at which an agreement was almost reached for the purchase and distribution of all rice needed by the island during the 1918-19 season, through a committee of the trade, controlled by the food commission. This plan fell through when large receipts of rice suddenly flooded our market; but it is to be regretted that the matter was not carried to a successful agreement, since such a plan would have prevented heavy losses to the trade, secured a steady supply and maintained a fair price, even after the activities of the food commission had closed.

Notwithstanding the heavy receipts of rice during February and March of the present year, the food commission foresaw that the crop in the United States would not be sufficient for the demand, and that Asiatic rice would not be available when needed later, and therefore in addition to the 160,000 or more pockets purchased, it placed an order for 30,000 pockets of California rice for February and March shipments, which served to induce other purchases by the trade, and have greatly helped to prevent a shortage of rice later in the season.

The large quantities of damaged rice on the island and the cost of financing and storing the large stocks made sales very difficult, and, although facing a heavy loss, the food commission determined to hold its rice until the situation improved. It was estimated that in May, when the available supply could be accurately gauged, confidence would be restored and the market return to a normal condition, and that the stocks on hand could still be sold in time to liquidate the assets of the commission by June 30, 1919.

This proved correct, as the sales of rice made by the food commission in May and June aggregated over 70,000 pockets, and its entire stock was disposed of by June 30, at fair prices.

Whilst holding this rice for two months longer might have yielded a larger profit, the commission felt that it should only aim at covering the cost of its rice without increasing the price to the public, and that the risks attendant upon holding this rice for a longer period were too great to justify a speculation. These risks included deterioration, depreciation by weevils, loss in weight, cost of hurricane insurance, besides the fact that the condition of the main warehouse in which the rice was stored caused considerable uneasiness through the gradual sinking of the floor, due to undermining by the sea.

It is to be feared that the high prices paid in New York for rice will claim a large quantity of our supply for reshipment, and this causes some uneasiness to the commission, as the new crop harvesting will be late this year. There is, therefore, a probability that the 1918 situation will be repeated about September or October of this year. The shortage of rice is, in fact, world-wide, and it is now out of our power to offer a remedy for this island.

SUGAR.

Toward the close of the last sugar season the food commission was somewhat concerned over the possibility that there would be a lack of supplies for local consumption and was prepared to purchase a large quantity of plantation washed and granulated to prevent its shipment north, but the higher price at which the new crop was to be sold induced many to make purchases on the assurance of being able to sell below the new price after the crop started. The Federal rules made it illegal to sell sugars at more than the fixed advance over its cost to the dealer.

The supply was thus assured until new crop sugars could come into the market, but the grades that were thus held over were inferior plantation washed, and a great percentage was ordinary 96° centrifugals; so that arrangements were made for the manufacture of some lots of 96° sugars into plantation washed and granulated, and on such remanufactured sugars the new crop price was allowed. The difference in price barely covered manufacturing losses, but a supply of high-grade sugars was secured when it would have been inadvisable to draw upon the northern markets for refined.

Finally, when the new crop started (Dec. 9, 1918) prices were fixed in relation to the price of \$7.28 c. i. f. New York for 96° Porto Rico sugars paid by the Sugar Equalization Board. The sale of sugar was left free on February 10, 1919, but the prices have substantially been adhered to throughout the season. It is possible, however, that for the higher grades there will be an advance later in the year, as stocks of these grades become scarcer.

The experiment started in 1917 was very successful in 1918 and has been still more so in 1919, so that refined sugars have been received in small quantities for industrial purposes only, a fine grade of local granulated having displaced the refined sugars for household consumption.

In 1918 sales of Porto Rico sugars for local consumption from the beginning of the crop to November 30 were 43,325 tons, and in 1919 this figure may be reached, but the grades sold have been of higher quantity than in the preceding year.

This is a new industry fostered by the food commission which not only results in a saving to the consumer but conserves shipping space and yields a good profit to the sugar manufacturers, besides saving them interest, insurance, and storage charges, and minimizing the loss in weight.

WHEAT FLOUR.

In November, 1918, it was found that, due to transportation difficulties, shipments of flour were not coming forward in volume to assure the commission of an adequate supply for the island, and several large lots of flour were purchased, the sale of which has maintained prices stable during the first half of 1919.

POULTRY.

The experiment referred to in the former report was not extended, due to the changed conditions brought about by the armistice. The stock placed in charge of the College of Agriculture at Mayaguez was taken over by this college, and it is hoped that some permanent improvement may result.

MILK.

This problem continued to be one of the most difficult dealt with by the commission. The matter has been exhaustively considered in the previous report and the only hope of its solution in the future rests on the propaganda started by the commission for the eradication of tick in the island, which will enable cattle raisers and dairymen to import improved stock.

This propaganda has borne fruit in the passage of a law by the legislature at its last session appropriating a certain sum to carry on the work of tick eradication.

With the very limited supply of milk available, the food commission continued its practice of price fixing until May, 1919, changing these prices for the local sale of milk in the different municipalities, at the request of the mayors or municipal councils, as circumstances have warranted from time to time.

It was found that unscrupulous dairymen and milk vendors were supplying the officers' messes at Camp Las Casas with milk at prices violating the resolutions of the commission, and the matter was taken up with Brig. Gen. Edward P. Chrisman, commanding, who, after conducting an investigation, found that resolution No. 42 was being violated at the camp and issued the following order:

"BULLETIN"
"No. 122 }

HEADQUARTERS CAMP LAS CASAS, P.R.,
October 8, 1918

"1. The attention of all officers is called to the provisions of resolution No. 42, fixing the price and regulating the sale of fresh milk in San Juan, approved August 19, 1918, by the food commission of Porto Rico, which will be strictly complied with.

"2. All officers in camp who are receiving milk will notify the sellers that in future the milk will be paid for according to the schedule of prices fixed by the food commission.

"3. No price in excess of 14 cents per standard quart will be paid unless the container is plainly marked in accordance with the law.

"By command of Brig. Gen. CHRISMAN:

"JAIME NADAL,

"Major 373rd Inf., U. S. A., Adjutant.

During the influenza epidemic, in November, 1918, the authorities appealed to the food commission to secure a supply of condensed and evaporated milk, and within a few days 1,200 cases were placed at the disposal of the sanitary board through the bureau of supplies, printing and transportation.

In January, 1919, as a means of inducing dairymen to improve their cattle, an appropriation of \$10,000 was agreed upon, which was to be distributed at the rate of \$50 per milch cow, and \$100 per bull of approved breeds brought into the island within 90 days, and also \$20 per buck of certain breeds of goats.

The matter was, however, reconsidered and the resolution repealed before it was published, as the commission believes that, unless tick is eradicated from the island, it is a waste of money to introduce such selected cattle.

On May 5, 1919, following the policy of withdrawing all restrictions, preliminary to closing its activities, the last of the resolutions pending were revoked, and these were those affecting the sale of milk. Resolutions Nos. 19 and 23, relating to the sale of domestic cheese, Nos. 22, 25, and 26, prohibiting sale of fresh milk at hotels and other public places, and Nos. 42, 47, and 52, regulating the sale of milk in San Juan, as well as all special regulations fixing prices in the different municipalities, were repealed.

It is a coincidence that, exactly two years after holding its first meeting, the food commission withdrew all the restrictions it had enacted.

FINANCING.

The food commission was able to maintain the same system of financing described in its last report. A list of the notes negotiated by the commission is given in the auditor's report. The dates of repayment of each note also appear in said exhibits.

In addition, a revolving credit of \$500,000 was negotiated with the San Juan branch of the National City Bank of New York, under which payments were made in New York and the drafts honored on presentation at San Juan.

The earthquake of October 11, 1918, and the successive shocks caused such damage on the western end of the island, that it was feared that the Fourth Liberty Loan subscriptions would fall short of the quota, and an extra effort was needed in districts which had not suffered so severely. With the approval of the governor the food commission subscribed \$100,000 toward this loan.

BUILDING.

On June 30, 1919, the title to the building purchased by the commission was transferred to The People of Porto Rico. A law passed by the last session of the legislative assembly and approved by the governor assigns this building to the housing of the historical documents of the government, so that a noble use has been found for the building which has served as the office of the food commission for the past year.

CAPITOL BUILDING.

The legislative assembly enacted a law which has received the governor's approval, whereby all the surplus funds of the food commission, upon the termination of its work, shall pass to a trust fund with the treasurer of Porto Rico, for the purpose of building a capitol.

This will be a monument to commemorate the participation of Porto Rico in the Great War, in addition to filling a much needed want, and providing not only a comfortable and dignified home for our Territorial legislature and supreme court, but also adding another fine building to the grand boulevard which serves as the main entrance to the city of San Juan proper.

It will forever be a monument to the administration of our war governor, Arthur Yager.

CASTOR BEANS.

An active propaganda for the planting of castor beans was undertaken, and the commission was preparing contracts for a further extension of the acreage when the signing of the armistice put an end to the national need of castor oil for aeroplane lubrications.

MEATS.

The law of December, 1917, giving the municipal authorities a larger measure of control in the supply of meats, induced the food commission to gradually withdraw its interference.

On July 11, 1918, at the request of the mayor of Ponce, a maximum price of 48 cents per kilogram was fixed for the sale of fresh pork in Ponce.

The same was done with Vieques, the maximum prices being fixed there as follows:

Fresh pork, per pound.....	\$0.20
Fresh mutton, per pound.....	.20
Fresh goat meat, per pound.....	.15

In San Juan, the requirements of Camp Las Casas rather complicated the matter and at the request of the mayor a member of the food commission (Mr. Walcott) was appointed to act on a committee that had charge of the matter. On July 22, 1918, Mr. Walcott reported that the principal dealer in fresh meats in San Juan agreed to maintain a uniform price of 24 cents per pound during the following three months as a result of conferences with the said committee.

On September 19, 1918, the mayor of Humacao reported difficulties with the regular purveyors of meat at that city, and the food commission placed \$500 at his disposal for the municipality to use as a revolving fund to furnish fresh meat to the city. It was unnecessary for the mayor to draw upon this fund, as the meat dealers changed their attitude when they found the city ready to enter into the field of their business.

The problem can not be solved except by improving the source of supply, and this depends principally on the eradication of tick, as explained under the heading of "milk."

COMMERCIAL TRANSACTIONS.

The auditor of Porto Rico has made an exhaustive examination of the accounts of this commission, and his final report is appended hereto.

From said report it appears that the total sales of merchandise have amounted to \$4,371,430.65, yielding a net profit of \$569,649.44, from which amount \$68,869.39 has been spent for agricultural propaganda and for assuring a supply of vegetables for San Juan during the existence of Camp Las Casas.

It may be well to point out that since the customs duties accrue to The People of Porto Rico, having been paid here instead of on the mainland by the policy of the commission in purchasing Asiatic rice in bond, an additional profit of \$97,005.63 has been received by the Porto Rican Government due to the activities of the food commission.

All the expenses of the commission have been paid out of its profits so that the net financial results of its operations may be estimated to yield over \$700,000 to the Government.

It is only proper to add that, in obtaining this result, the consumer has not contributed even indirectly, since deducting the profits amounting to some \$500,000 made on the sale of the cargo of Saigon rice, the details of which appeared in our last report, it will be seen that the commission has aimed at carrying on its merchandising practically at cost.

Due to its financial facilities and the business connections it established, the purchases made by the commission were, in the main, at prices lower than those paid by the trade here, and this enabled the commission to distribute the goods through wholesalers without averaging any extra cost to the buyers.

As an illustration of this, we may take the figures in an auditor's report as follows:

Gross profits from sales.....	\$674,233.81
Less profits on cargo of Saigon rice ex Camilla Rickmers sold in Naples (Italy).....	500,676.68
Gross profits from sales in Porto Rico.....	173,577.13
Less expenses as listed.....	81,864.49
Net profits.....	91,712.64
Less interest paid.....	\$32,966.47
Interest received.....	14,197.16
Net interest.....	18,769.31
Exchange and other losses listed.....	3,950.57
	22,719.88
Surplus from sales in Porto Rico.....	68,992.76
Sales amounted to.....	4,371,430.65
Less proceeds from cargo of Saigon rice mentioned above.....	735,175.19
Sales in Porto Rico.....	3,636,255.46

So that the ratio of profits to sales is less than 1.90 per cent on the sales made in Porto Rico, while the \$68,869.39 spent in agricultural propaganda, practically coincide with the \$68,992.76 of the profits from merchandising.

The cost of doing business works out as follows on the local sales made by the commission:

Expenses as listed	\$81,864.48
Interest net	18,708.31
Exchange and other	2,960.57
Total	104,584.37

which is 2.87 per cent on the sales made in Porto Rico amounting to \$3,636,255.46, as stated above.

It is only fair to say that, of the expense items deducted from the gross profits on sales, only a part are properly chargeable to the commercial operations of the commission, as fully 75 per cent of the salaries, postage, telegraph and telephone, traveling expenses, per diems, and miscellaneous expenses would have been incurred in any event to carry out the purposes for which the commission was created; so that a proper distribution of expense would make the cost of its commercial activities infinitesimal.

Based on the above estimate the expenses proportionately chargeable to the commercial department would be only \$33,814.49 or 0.93 per cent of the total local sales.

This estimate would make the general expenses of the food commission \$70,769.88, to which should be added the agricultural expense of \$68,869.39, or a total of \$139,639.27 contributed by the profits from the commercial department, besides the \$97,005.63 paid into the treasury for customs duties, or a total of \$236,644.90 in addition to the \$500,676.68, profits on the *Camilla Bickmers* cargo sold in Naples.

The business of the food commission has been financed by the local banks, as will be seen from the list of notes negotiated appearing in the auditor's report.

On these notes and on commercial credits opened in New York and San Francisco the total interest has amounted to \$32,966.47, but the cost to the commission has been in part offset by \$14,197.16 received for interest, mainly on deposits held outside of Porto Rico; so that net interest paid has been \$18,769.31 or only 0.52 per cent on the total purchases of merchandise, which amounted to \$3,600,191.21.

CLAIMS.

The list of assets and cash turned over to the treasurer of Porto Rico shows three items which are in the nature of claims. The first amounting to \$411.72 is for claims against the railroad administration presented by Helm & Co., of San Francisco, on behalf of the food commission.

The second for \$5,095.35 is for amounts due by the New York & Porto Rico Steamship Co. for short deliveries on goods.

The third is the claim against the Food Administration Grain Corporation, for which an award exists amounting to \$117,680.83, the balance being expenses in connection with the award, making this claim total \$119,860.96.

The Grain Corporation acknowledged liability for \$27,927.04 and offered this sum in full settlement, but the offer was rejected on these conditions, although this amount was claimed as due to the food commission in any event.

The present status of the matter is an agreement that it be left in abeyance until Mr. Hoover's return from Europe, which it is expected will be during September.

After a conference with Mr. Hoover on the subject, further action will be decided upon, if warranted.

AGRICULTURAL PROPAGANDA.

The following extracts are from the report submitted to the food commission by Mr. Walcott on behalf of the committee on agriculture:

"The successful work accomplished in increasing the island's food supply and the effective agricultural propaganda along progressive lines, developed last year, was continued until the end of the war. When hostilities ceased, the active field work of this department was discontinued.

"*Staff.*—The staff of 25 agents was at the beginning of the year increased to 26 with the appointment of one for the Salinas district. The 10 agricultural teachers appointed by the department of education continued to act as our agents in their respective districts. In July Mr. Henry C. Henriksen, of the extension department of the Federal experiment station, who was the soul of this department as its director, left its administrative part to Mr. Félix Reina, his assistant, in order that he might devote his time to his former line of work.

"*Agricultural committees.*—To insure the stability of the work so well started, an effort was made to organize the agricultural committees on a permanent basis. A

great many of these committees did efficient work from the very beginning, and it was the aim to form a permanent organization in every barrio that would be able to continue the work indefinitely.

Cooperative societies.—Cooperation is the key to success in the solution of a great many of our agricultural problems. Many ideas have been advanced, most of them the outcome of systems planted in progressive European and continental agricultural countries which, in our humble opinion, are altogether impractical in our island, due to the backward condition of the average farmer. If we want to succeed in this important activity of human endeavor, our beginning should be along simple lines and in those agencies in which the farmers may see in a short period of time the results of their cooperation. Based on this fact, we began showing the value of cooperation to the agricultural committees, which were supposed to represent the best in each barrio by helping them to buy seeds and other farm supplies in cooperation. For instance, committees in Ciales bought in this form good setting eggs, and we have reports from other agents of many interesting results obtained. Another line in which cooperation showed excellent results was in the construction of dipping tanks for the eradication of cattle tick. We hope that these stepping stones to true cooperation may not disappear with the ceasing of this department, but that they may develop in far larger activities in each barrio of the island.

Agricultural meetings.—Due to the influenza epidemic, when gatherings of people were prohibited by the department of sanitation for about two months, the agricultural meetings suffered a great decrease. But those which were held were well attended. The department of education, through its supervisors and teachers, cooperated to make them a real source of instruction in improving the social, moral, and economic conditions of the rural neighborhoods. Illustrated lectures by special men sent from our office were given from time to time in cities and towns, frequently in outlying barrios.

Demonstration plots.—Demonstration plays an important rôle in all well-organized agricultural extension work. The last year program was continued, and from May 1 to January 30, 1919, there were a total of 408 such plots under the immediate supervision of the field agents of this department.

Seed distribution.—On account of the high price and often poor quality of the Canarian onion seed, the onion planting in the island is greatly handicapped. From experiments last year with onion seed from California the results obtained were not conclusive, and so 75 pounds of seed were ordered from California and sold to the farmers at cost which was \$2.80 per pound when onion seed was selling by the local merchants from \$3.25 to \$3.50 per pound. The reports we have at this date, is that the seed germinated well and that the plants are growing splendidly. As this has been a very unfavorable year for onions, as a whole, it will be difficult to obtain exact data on the outcome of this trial, but we hope that other agencies will continue the work.

"Nearly a ton and a half of castor beans were brought in from Santo Domingo and sold here at cost at the time when castor bean was a war necessity and farmers were promised profitable prices for their crops by the Federal Government. No definite data is at hand in regard to field results but the consensus of opinion is that the venture was not remunerative. Aside from that the crop did not mature until the war was over and consequently there was no sale for the beans, for the time being at least.

"No other seeds were handled by this department. The last year scarcity of seeds at the planting season made it necessary for us to conduct a campaign for saving seeds. This campaign with its slogan "Save enough seeds for future planting" was very effective and as a general rule there was no shortage.

Home gardens.—The home gardens continued to be a source of increasing the food supply. The movement of the garden army was extended to our island and an enthusiastic propaganda was begun by the school-teachers in close cooperation with our agents, and at the end of July we had the large number of 43,889, twice as much as last year.

Fairs and exhibitions.—In order to promote an interest in better agricultural products and to increase the acreage of food crops, the food commission on the recommendation of this department set aside the sum of \$1,000 to be distributed as prizes at fairs and exhibitions. In order to set standards for agricultural products a complete circular on rules and regulations was drawn up by a committee appointed by the food commission in cooperation with the department of education. Special rules were also made for school exhibits and a pamphlet "How to grow exhibition products" was published.

"The interest taken was so great that a total of 25 agricultural exhibits were held in the island. Some of them, especially the ones held at Corozal and Coamo, were regular agricultural fairs. The agent at Corozal reports that more than \$500 were given as

prizes, while the agent at Coamo says that near 3,000 persons visited the fair and 73 farmers had exhibits.

"Crop statistics and live stock.—The same plan used at the beginning of this department for obtaining data in relation to food crops was continued and month by month reports were made by the agents of the new acreage in their district. By winning the confidence of all farmers, it was made possible to gather the statistics through the local agricultural committees, relieving the school-teachers of this work and obtaining at the same time more accurate reports due to the experience and agricultural knowledge of these committees. Criticism in regard to the accuracy of our crop reports was not wanting. In one case a prominent town official called our attention to very gross error in three municipalities. A new census was taken immediately including not alone the crops planted and the acreage, but also the planters' names with the result that the first estimates were shown to be 90 per cent within the actual figures. While that error was not large, we have reason to believe that the error for the island as a whole was considerably less. The high degree of accuracy obtained is in many respects remarkable considering that so few farmers know what the per acre yield is. During the existence of this department we determined every month the amount of food that would be available three or more months hence by multiplying the acreage planted by the estimated minimum yields. This estimate was taken from figures furnished by all districts in the island at the beginning of the campaign, but we soon found that the figures were very much too low. That was partly due to ignorance and partly to improved yields. We finally prepared blanks and attempted to get some accurate data by weighing yields from measured areas but unfortunately the department work was discontinued before this interesting data could be obtained.

"In all countries where the agricultural activities move along progressive lines, agricultural statistics are very important in the stimulus of better farm methods for increasing acreage and as a safeguard and guide to the producers and consumers. As this work has been so well started and has proved to be interesting as well as valuable, we hope that it will be continued by some other government agency. This as well as other activities of the agricultural committees merit all the help and support the government can give. An agricultural committee in every "barrio" working for the betterment of the social, moral, and economic welfare of the neighborhood will be a potent factor in the education toward self-government.

"Tick eradication.—No pure breed of cattle can be introduced at present in Porto Rico without taking a great risk in loss due to the cattle tick. Our cattle need to be crossed with standard meat and dairy types. Experiments by the experiment station at Mayaguez and individuals has proven the advantage of these methods, but few pure-bred cattle have been imported because of the cattle tick with which the island is infested. The food commission, following its true policy of helping the farmers' interest, began an active campaign for eradicating the cattle tick by the construction of dipping tanks and plans were also made to buy the chemicals and sell them at cost to the people.

"In order to systematize the work the services of Dr. Bagué, professor of animal husbandry in the College of Agriculture and Mechanical Arts, were engaged, and nearly three months were spent by him traveling around the island delivering lectures and discussing personally the cattle-tick question with the people. The results of this propaganda can be better appreciated by quoting figures from Dr. Bagué's report. 'Persons present at lectures, 3,000; boards established for further propaganda, 47; number of tanks under construction, 64.'

"In conclusion we may say that through the efforts of Mr. Henry C. Henricksen, formerly director of this department, a bill has been introduced in the legislature to make obligatory the dipping of all horned stock and the time is not far when our island will be clean from this expensive scourge.

"Publications.—The following have been issued during the year: 'Aves de Corral' (poultry); How to grow exhibition products; Rules and regulations for fairs and exhibitions.

"Market Division.—The farm of more than 250 acres leased by this commission near the town of Aibonito was not a financial success due to the great distance from the San Juan market. The actual money loss was small, however, and the undertaking served the purpose for which it was conceived, viz, that of supplying San Juan and the training camp with vegetables. The demonstration has also been valuable, as it has shown that many crops not now produced commercially can be grown successfully in the mountain districts, but that it is not profitable with present shipping facilities.

"Nearly 60 acres of potatoes were planted and as an experiment 40 barrels shipped to the New York market in February, when new potatoes were quoted high. As a valuable lesson for future growers we permit ourselves to quote from the letter received from the potato dealer to whom they were consigned: 'We wish to say that with further

experiment along the line, with the use, possibly, of more fertilizer, and with the proper percentage in the fertilizer that should be used for growing potatoes, there is no question in our minds but that you can grow new potatoes ready for our market possibly during the months of January and February, in which case your crop would come in advance of the Bermuda, perhaps, and your goods would have first call if they could reach the market in the proper condition so they would easily and promptly be recognized as new potatoes. But to be sold as such to good advantage, all grubbiness must be eliminated and they must arrive in fresh order.

"In selling our potatoes here, we found it hard to compete with the old imported stock from the States. To offset this handicap of the home crop, an educational campaign was started through the papers discussing the merits of the home-grown potato and what a difference there is in quality between a new potato and an old one. By means of the parcel post we have sold many packages of 25 pounds, and in this way we have been able to convince people that the homegrown potatoes are of superior quality. This propaganda has undoubtedly helped to pave the way for the profitable marketing of this crop, which will in the future be grown largely by farmers of the hill districts.

"*Summary.*—The gradual development of this department, started on June 18, 1917, and the splendid success of its work has been largely due to its first director, Mr. Henry C. Henricksen, a man of great experience in tropical agriculture, who outlined the plans along practical lines. While the immediate aim was to increase the food supply as a war measure, and while that aim was attained beyond expectation, the greatest value of the work will be found to be in the foundation laid for permanent agricultural extension work. Our agents, visiting practically every farmer's home, became closely identified with them and a state of confidence and good will was established which will be of great help in future work. The formation of the agricultural committee elected by the farmers themselves, representing the best in each 'barrio,' was a great agency for progress along all lines, social as well as agricultural, and it laid the stepping stones to future hearty cooperation between themselves. The valuable statistics gathered month by month, with a great degree of accuracy, has stimulated planting and it has also served to stabilize the market. The demonstration plots have served as an incentive to the agricultural population as a whole, showing the value of improved methods."

CONCLUDING REMARKS.

At the request of the governor, the food commission has postponed its final dissolution, although it has ceased in its activities and closed its offices, yet this being its final report it is proper to acknowledge once more its gratitude for the cooperation it has received from the governor and from the public in general.

It also wishes to mention the loyalty and efficiency of its staff of employees, and while the number has rapidly decreased during the past eight months, those remaining have maintained the same spirit which has always been a source of pride and of great comfort to the members of the food commission.

It is with regret that the associations of two years are broken, but the food commission feels confident that these men and women will succeed, and that their earnestness, loyalty, and efficiency will be recognized in their new fields of activity.

The special thanks of the commission are due to E. M. Vassallo, who, as secretary and later acting treasurer of the food commission, has rendered such faithful service; to Manuel Monclova, whose accuracy as accountant and cashier has made the auditing of the commission's accounts so easy and intelligible; to José Cabanillas, the head of the commercial department of the commission, to whom was entrusted the details of selling nearly \$4,000,000 of goods, and whose advice and foresight always proved of value; to Rafael Pujals Carlo, Mr. Cabanillas's able assistant, whose loyalty and cheerful industry were ever relied on.

To continue this list would be invidious and would include the entire staff.

In our last report we mentioned the cooperation received from the press, the bureau of insular affairs, the United States Department of Agriculture, the insular police, the local courts, and others, and we can now say that this cooperation was continued throughout the past year.

We should also state that much encouragement and satisfaction has been given to the members of the food commission by the friendly attitude of the legislative assembly during its last session.

Respectfully submitted.

By order of the food commission:

ALBERT E. LEE, *President.*

E. M. VASSALLO,

Secretary and Acting Treasurer.

OFFICE OF THE AUDITOR OF PORTO RICO,
San Juan, P. R., August 22, 1919.

The Food Commission,
San Juan, P. R.
(Through the auditor of Porto Rico).

GENTLEMEN: In accordance with your request under date of June 26, 1919, addressed to the auditor of Porto Rico, and in compliance with verbal instructions received from this official, I have made an examination of the accounting records and financial operations of the commission, for the period from May 1, 1918, to July 15, 1919, and have the honor to submit herewith my report thereon, comprising five pages of comments, and the following exhibits:

Exhibit A: Cash reconciliation statement as of July 15, 1919.

Exhibit B: Trial balance as of July 15, 1919.

Exhibit C: Statement showing result of operation for the period May 1, 1918, to July 15, 1919.

Exhibit D: Balance sheet at the close of business, July 15, 1919.

Exhibit E: Statement of notes issued by the commission for the purpose of financing its operations, May 17, 1917, to July 15, 1919.

Exhibit F: Consolidated and final statement on closing its operations as of July 15, 1919.

Exhibit G: Statement showing final disposition of assets of food commission turned over to the insular government, as of July 15, 1919.

Respectfully,

J. A. E. RODRIGUEZ,
Chief, Division of Audits.

FOOD COMMISSION.

COMMENTS ON AUDIT.

This audit covers the period from May 1, 1918, to July 15, 1919, the date when the food commission ceased its operations and turned over to the treasurer of Porto Rico all its assets.

All the cash entries for the period were checked with the corresponding vouchers and supporting papers. A general analysis was made of all the vouchers paid and the results thus obtained checked against the ledger accounts and found to agree in every case. Vouchers were on file for every payment made during the period.

Exhibit A.—This exhibit shows the amount of cash available as of July 15, 1919, the date of closing operations. This reconciliation, however, does not take into consideration the amount of cash and other cash assets turned over to the treasurer of Porto Rico as of June 30, 1919 (\$266,403.48, see Exhibit D).

Exhibit B.—This exhibit is a trial balance of the ledger accounts of the food commission as of July 15, 1919, which has been used as a basis for the other statements which follow.

Exhibit C.—This exhibit shows the result of operations of the commission during the period under examination. It will be seen therefrom that during said period the commission effected sales in the sum of \$2,691,237.33 of goods which cost them \$2,524,653.20, which would give them a gross profit of \$166,584.13.

Were it not for the heavy overhead expenses imposed, to a certain extent, upon the commission, the final result would show a nice clear profit instead of a small loss (\$232.44) as shown thereon. The total expenses charged by me to operation show a total of \$166,816.57; however, \$62,155.27 of this sum paid as custom duties on importations made by the commission, should not be considered as an expense when the relation between the food commission, the insular government and the money thus paid is taken into consideration, as this sum paid by the commission was covered as an income into the insular treasury.

While not in exactly the same relation as above, yet a similar circumstance surrounds the two large items of expense, "Expenses, subcommittee of agriculture, \$33,041.80," and "Expenses, market division, \$10,425.77," appearing on this exhibit. as these two items of expense were incurred by the commission not as a business venture of their own, but only as a propaganda for the development of agriculture, the benefits of which to the island can not be measured by dollars and cents; but which undoubtedly had a considerable effect on the cost of living. If these three big items of expense, amounting to \$105,622.84, had not been charged as an operating expense, the operations for the period would have shown a net gain of \$113,186.78 instead of the small profit, \$7,796.38, shown at the closing of the loss and gain account.

The other items appearing on this exhibit are self-explanatory and it is not considered necessary to comment in detail thereon.

Exhibit D.—This exhibit is a balance sheet as of July 15, 1919. It shows as a final result that the commission at this date is the possessor of a surplus of \$500,780.05, as the result of its operations since its inauguration in April, 1917.

How the food commission, having started its operations without any capital of its own, could in a little over two years accumulate a surplus of over half a million dollars, is a feat which can hardly be explained in detail, and we have to account for this success only by the activity and untiring efforts of the able men in whose hands the affairs of the commission have been placed.

No special comments will be made with regard to the various items appearing on this exhibit with the exception of the "Deferred assets" for the reason that the final adjustment of these claims may change the final result considerably.

The claim against Helm & Co. in the amount of \$411.72 is the result of shortage in shipment of rice bought by the food commission from the said firm and also on account of overcharge on freight. This amount has been claimed by the food commission but the firm alleges the claim to be against the transportation companies over whose lines the shipment was routed. The ultimate adjustment of this claim may be either a total or a partial collection of the above amount, and, of course, the final result may be slightly modified thereby.

Claim against the New York & Porto Rico Steamship Co. in the sum of \$5,095.35. This claim has arisen from shortages alleged by the food commission on shipments of rice over the line of the said company. As in the previous case, the final adjustment of this claim may change somewhat the final result shown on this exhibit.

Claim against the United States Food Administration, Grain Corporation, in the sum of \$119,860.96. This claim is the result of damage suffered by rice shipped to the food commission by the Grain Corporation, apparently a branch of the United States Food Administration. Some of the rice shipped by them to the food commission did deteriorate considerably between New Orleans and Porto Rico. The food commission alleges that the rice must have been harvested and shipped in unfavorable condition, while the Grain Corporation alleges that their official inspector reported the rice as O. K. at the time of shipment, and refuses to accept any responsibility for the damage. In order to avoid further loss, the food commission applied to the Federal food administrator for relief and this official appointed a board of arbitration to examine the rice and submit a report on their findings. On the other hand, the Grain Corporation alleges to have sold nothing to the food commission and hence have nothing to arbitrate, basing their allegation on the fact that they only acted as intermediaries between the food commission and the mills without any profit to them.

There is no doubt in my mind but that this claim will necessitate a great deal of effort and probably considerable concession by both sides before it can be finally disposed of, and of course any change affecting the amount of this claim will likewise affect the final result shown by this exhibit.

I have deemed it advisable on my part to go into the details of these three claims in order that it may be clearly shown that while I have included them among the assets of the commission, this has been done because they represent assets of certain value to the commission, and therefore this is the proper place to show them even though the real value thereof is not certainly known by me, and perhaps it may not be the value shown in the respective accounts.

Exhibit E.—Joint resolution No. 10, approved April 12, 1917, creating the food commission, authorized the governor to borrow \$1,000,000 for the purpose of financing the activities of the commission; and also appropriated the sum of \$5,000 as a preliminary sum with which the commission could begin its operations. The commission did not use a single cent of the money thus appropriated, but on the other hand financed all its operations with borrowed funds, as shown by this exhibit.

As will be seen, the food commission borrowed during the period from May 17, 1917, to November 20, 1918, the sum of \$1,335,000, and it can safely be stated that at no time during the entire period was the commission short of funds or was its credit impaired in the least on account of having any of its notes overdue. This, in my opinion, is a wonderful feat of financeering, and the highest credit is due to the men who so disinterestedly gave their time and efforts to the affairs of the commission.

Exhibit F.—This exhibit is a consolidated statement of the operations of the commission for the entire period of its existence, and it shows the various items in totals for the entire period, as extracted from the partial reports of previous year and of the year under discussion.

This exhibit also shows the three big items of "custom duties," "agricultural propaganda," and the "market division," which, as stated before, should not be considered as operating expenses of the commission. While the total net profits are

thus shown in this statement to be \$569,649.44, the final surplus is the same as that shown in Exhibit D, or \$500,780.05.

Exhibit G.—This exhibit shows the final disposition of the assets of the commission by turning same over to the treasurer of Porto Rico, in detail. The cash items and the proceeds of the other items are to be covered into a special fund for the construction of a capitol building, as per the provisions of act No. 47, approved June 13, 1919.

EXHIBIT A.—Cash reconciliation statement as of July 15, 1919.

FOOD COMMISSION.

Cash balance as per cash book on July 15, 1919.....		\$16,981.62
Cash in office July 15, 1919.....	\$751.25	
Cash in the American Colonial Bank, as per statement July 14, 1919.....	\$17,520.07	
Less outstanding checks:		
No. 975.....	\$0.50	
1025.....	.60	
1031.....	412.70	
1036.....	5.00	
1037.....	112.69	
1038.....	9.33	
1039.....	102.72	
1040.....	186.80	
1042.....	22.50	
1043.....	30.00	
1044.....	3.45	
1045.....	115.88	
1046.....	28.23	
1047.....	2.00	
1048.....	2.20	
1049.....	6.00	
1050.....	125.00	
1051.....	41.66	
1052.....	25.00	
1053.....	77.44	
	1,289.70	
	16,230.37	
	16,981.62	16,981.62

EXHIBIT B.—Trial balance as of July 15, 1919.

FOOD COMMISSION.

Freight, cartage and express.....	\$859.41	
Rentals.....	2,404.79	
Depreciation of unexpendable property.....	674.05	
Reserve for depreciation of unexpendable property.....		\$674.05
Accrued insurance.....	6,376.85	
Loss and gain.....	207.46	
Interest and discount.....		10,778.67
Exchange.....	1,666.65	
Custom duties.....	62,155.27	
Helm & Co.....	411.72	
New York & Porto Rico Steamship Co.....	5,065.35	
Food commission capital account.....		492,963.67
Importation of cattle.....	116.60	
United States Army transport Kilpatrick.....	294.90	
Seed account.....	789.14	
Unexpendable property.....	4,081.00	
Subcommittee of agriculture.....	33,041.80	
Insular government.....	5,816.10	
Salaries.....	21,723.42	
Interest on notes.....	16,681.05	
Cash.....	16,981.62	
Postage, telegraph, and telephone.....	3,307.51	
Traveling expenses, wages, and per diems.....	5,386.70	
United States Food Administration Grain Corporation.....	119,860.96	
Bureau of supplies, printing, and transportation.....	150.00	
Advances to municipalities, seeds account.....	1,116.13	
Stock.....		166,564.13
Market division.....	10,425.77	
Expenses.....	5,579.95	
Treasurer of Porto Rico.....	300,000.00	
Bills receivable.....	47,646.32	
	671,020.52	671,020.52

EXHIBIT C.—Statement showing result of operation for the period May 1, 1918, to July 15, 1919.**FOOD COMMISSION.****OPERATING ACCOUNT.**

By sales during period.....		\$2,691,237.33
To cost of goods sold.....		2,524,653.20
Gross profits from sales.....		166,584.13
To expenses as follows:		
Salaries.....	\$21,723.42	
Freight, cartage, and express.....	859.41	
Rentals.....	2,404.79	
Accrued insurance (paid).....	6,376.85	
Custom duties.....	62,155.27	
Depreciation of unexpendable property.....	674.05	
Expenses, subcommittee of agriculture.....	33,041.80	
Interest on notes.....	16,881.05	
Postage, telegraph, and telephone.....	3,307.51	
Traveling expenses, wages, and per diems.....	3,386.70	
Expenses, market division.....	10,425.77	
Miscellaneous expenses.....	5,579.95	
		166,816.57
Net loss from "operation to "loss and gain" below.....		232.44

LOSS AND GAIN ACCOUNT.

By interest and discount.....		10,778.67
To net loss from operation.....	232.44	
To loss and gain (charge during period).....	207.46	
To exchange (paid by commission).....	1,656.65	
To importation of cattle.....	116.60	
To seeds account.....	769.14	
		2,982.29
Net profit for the period.....		7,796.38
To food commission, capital account.....	7,796.38	

EXHIBIT D.—Balance sheet at the close of business July 15, 1919.**FOOD COMMISSION.****ASSETS.**

Cash:		
In office (see Exhibit A).....	\$751.25	
In the American Colonial Bank (see Exhibit A).....	16,230.37	
In hands of the treasurer of Porto Rico, delivered to him on June 30, 1919, as per statement on file:		
Certified check.....	\$165,518.55	
Liberty bonds and interest accrued.....	100,884.93	
	266,403.48	
		\$283,385.10
Accounts receivable:		
United States Army transport Kilpatrick.....	294.90	
Advances to municipalities, seeds account.....	1,116.13	
Bureau of supplies, printing and transportation.....	150.00	
Bills receivable.....	47,646.32	
		49,207.35
Inventories:		
Office furniture and fixtures.....	4,081.00	
Less reserve for depreciation.....		674.05
		3,406.95
Office building and lot turned over to the treasurer of Porto Rico.....		31,013.82
Market place turned over to the treasurer of Porto Rico.....		2,582.70
Other property turned over to the insular government.....		5,816.10
		42,819.57
Deferred assets:		
Claim against Helm & Co.....	411.72	
Claim against the New York & Porto Rico Steamship Co.....	5,065.35	
Claim against United States Food administration Grain Corporation.....	119,860.96	
		125,368.03
		500,780.05

LIABILITIES.

Surplus account:		
From profits of previous year.....		492,983.67
From profits of period ending July 15, 1919 (see Exhibit C).....		7,796.38
		500,780.05

EXHIBIT E.—Statement of notes issued by the commission for the purpose of financing its operations, May 17, 1917, to July 15, 1919.

FOOD COMMISSION.

Date drawn.	Name of payee.	Amount.	Date of redemption.
May 17, 1917	American Colonial Bank.....	\$50,000	Aug. 31, 1917
June 11, 1917	Banco Comercial de Porto Rico.....	50,000	Sept. 30, 1917
Do.....	do.....	50,000	Nov. 30, 1917
Do.....	do.....	50,000	Dec. 31, 1917
July 2, 1917	American Colonial Bank.....	50,000	Nov. 30, 1917
Do.....	do.....	50,000	Do.....
Do.....	do.....	50,000	Jan. 4, 1918
Do.....	do.....	50,000	Mar. 2, 1918
Do.....	do.....	50,000	July 31, 1918
Do.....	do.....	35,000	Jan. 4, 1918
July 10, 1917	Banco Territ, y Agrícola.....	50,000	Sept. 30, 1917
Do.....	do.....	50,000	Nov. 30, 1917
Do.....	do.....	50,000	Feb. 26, 1918
Nov. 21, 1917	Royal Bank of Canada.....	50,000	Mar. 11, 1918
Do.....	do.....	50,000	Do.....
Do.....	do.....	50,000	Apr. 11, 1918
Do.....	do.....	50,000	May 20, 1918
Do.....	do.....	50,000	Do.....
Apr. 22, 1918	Banco Territ, y Agrícola.....	50,000	May 7, 1919
Do.....	do.....	50,000	June 8, 1919
Do.....	Banco Comercial de Porto Rico.....	50,000	May 27, 1919
Do.....	do.....	50,000	June 13, 1919
Do.....	American Colonial Bank.....	50,000	May 21, 1919
Do.....	do.....	50,000	May 27, 1919
Nov. 20, 1918	do.....	50,000	June 5, 1919
Do.....	Banco Comercial de Porto Rico.....	50,000	Do.....
Do.....	Banco Territ, y Agrícola.....	50,000	Do.....
	Total.....	1,335,000	

EXHIBIT F.—Consolidated and final statement on closing its operations as of July 15, 1919.

FOOD COMMISSION.

OPERATING ACCOUNT.

By total sales of merchandise.....		\$4,371,430.65
To total cost of goods sold.....	\$3,600,191.21	
Customs duties paid.....	97,006.63	
		3,697,196.84
Gross profits from sales.....		674,233.81
Less expenses as follows—		
Salaries.....	39,570.21	
Postage, telegraph, and telephone.....	6,588.50	
Freight, cartage, and express.....	875.53	
Traveling expenses, wages, and per diems.....	7,923.07	
Rentals.....	3,198.11	
Insurance.....	13,724.19	
Miscellaneous expenses.....	9,984.88	
		81,864.49
Net profits from operations.....		592,369.32

LOSS AND GAIN ACCOUNT.

Net profits from operations as above.....		592,369.32
Interest and discount received.....		14,197.16
Total.....		606,566.48
Less—		
Depreciation on furniture and fixtures.....	834.28	
Interest paid on notes.....	32,966.47	
Exchange.....	1,191.10	
Seeds account.....	1,253.70	
Cattle account.....	116.60	
Sundries.....	554.89	
		36,917.04
Total net profits.....		569,649.44
From which there was expended on appropriations approved by the governor for—		
Agricultural propaganda.....	56,226.45	
Market division.....	12,642.94	
		68,869.39
Surplus.....		500,780.05

EXHIBIT G.—*Statement showing final disposition of assets of food commission turned over to the insular government, as of July 15, 1919.***FOOD COMMISSION.**

Deed for the office building and lot.....	\$31,013.82	
Market building, Puerta de Tierra, delivered to the department of the interior.....	2,582.70	
		\$33,596.52
Furniture and equipment delivered to bureau of supplies, printing, and transportation, at cost less depreciation.....		9,223.05
Accounts receivable:		
Helm & Co., San Francisco, Calif.....	411.72	
New York & Porto Rico Steamship Co.....	5,095.35	
United States Army transport Kilpatrick.....	294.90	
Bureau of supplies, printing, and transportation.....	150.00	
Due by municipalities for seeds—		
Adjuntas.....	\$483.22	
Anasco.....	39.24	
Carolina.....	65.11	
Guayama.....	56.19	
Moca.....	50.00	
Patillas.....	39.56	
San Sebastian.....	287.31	
Yauco.....	95.50	
		1,116.13
		7,068.10
Food Administration Grain Corporation, claim.....		119,860.96
Cash items:		
Liberty bonds and interest accrued to June 30, 1919.....	100,884.88	
Bills receivable due July 30, 1919.....	47,646.32	
Certified check, June 30, 1919.....	165,518.55	
Certified check, July 15, 1919.....	13,201.57	
Certified check, July 15, 1919, to be carried as a special account.....	3,780.05	
		331,031.42
Total surplus (Exhibit F).....		500,780.05

INDEX.

- ACCOUNTS, historical review: 520.
- AGRICULTURAL ASSOCIATIONS, work of: 688.
- AGRICULTURAL IMPLEMENTS, imports: 12.
- AGRICULTURE:
 - Development: 37.
 - Experiment stations: 689.
 - Laws relative to: 37.
 - Legislation effecting: 685.
 - Municipal boards of: 688.
 - Production: 37.
 - Progress made: 685, 687.
 - Propaganda: 722.
 - Publications: 700.
- AGRONOMY, service of: 696.
- ALCOHOL, illicit traffic in: 71.
- ANIMALS, imports: 12.
- ANTHRAX, cases of: 158.
- APPOINTMENTS, list of: 64.
- APPROPRIATIONS:
 - Amount of: 233.
 - Consolidated statement: 298.
 - Insular government: 298.
 - Statement of: 400.
- ARCHINESS, Spanish: 92.
- ASSESSMENTS, property tax: 352.
- ASSETS:
 - Statement of: 251.
 - Statement of: 251.
- ATTORNEY GENERAL, report of: 617-683.
- AUDITOR:
 - Report of: 233-250.
 - Report of: 233-344.
- AUTOMOBILES:
 - Development of motor vehicles: 523.
 - Licenses to operate: 524.
 - Number of: 383.
 - Registration: 523.
 - Value of: 381.
- BACON, imports: 13.
- BANKS:
 - Establishment of: 364.
 - New: 6.
 - Number of: 52.
 - Report of: 366.
 - Resources and liabilities: 351.
- BEANS, imports: 12.
- BEESWAX, exports: 14.
- BENEDICT, JOSE E., report of: 345-396.
- BERIBERI, cases of: 159.
- BIRTHS, number of: 204.
- BOARD OF PHARMACY, work of: 30.
- BONDED INDEBTEDNESS.
 - Outstanding: 34.
 - Statement of: 350.
- BONDS:
 - Insular government: 282.
 - Municipal: 265.
 - School boards: 266.
 - Statement of: 350.

- BONNER, J. W.:**
Appointment: 43.
Report of: 233-344.
Report of: 233-250.
- BREADSTUFFS:**
Imports: 10.
Imports: 12.
- BRIDGES:**
Construction: 399, 406-420.
Historical review: 420.
- BUILDINGS:**
Expenditures for: 39.
Work on: 455, 461.
- BUILDINGS, PUBLIC:**
Historical résumé: 435.
Valuation of: 275.
Value and location of: 274.
- BUTTER, imports:** 13.
- CALEDONIA CANE, study of:** 693.
- CANDLES, imports:** 12.
- CARNEGIE LIBRARY, board of trustees:** 31.
- CARRIAGES, imports:** 12.
- CARS, imports:** 12.
- CASTOR BEANS, planting of:** 720.
- CATTLE:**
Number of: 383.
Value of: 381.
- CEMENT, imports:** 12.
- CEREBROSPINAL MENINGITIS, cases of:** 164.
- CHARITY SCHOOLS, report on:** 27.
- CHEESE, imports:** 13.
- CHEMISTRY DIVISION, work of:** 693.
- CHINAWARE, imports:** 12.
- CIGARETTES, exports:** 15.
- CIGARS, exports:** 15, 23.
- CITRUS FRUITS:**
Area planted: 686.
Insect pests: 695.
- CIVIL SERVICE:**
Statistics: 73.
Employees, number of: 82.
Employees: 53.
- CIVIL SERVICE COMMISSION, work of:** 29.
- COAL, imports:** 12.
- COCOA:**
Imports: 12.
Exports: 14.
- COCOANUTS:**
Acreage planted in: 378.
Lands, value of: 373.
- COCONUTS, area planted:** 686.
- COFFEE:**
Acreage planted in: 378.
Lands, value of: 373.
Exports: 5, 14, 18, 23.
Price of: 18.
Area planted: 686.
- COFFEE INDUSTRY, labor condition:** 705.
- COMMERCE, value of:** 5, 8.
- CONTAGIOUS DISEASES, control of:** 139.
- CORDAGE, imports:** 12.
- CORN MEAL, imports:** 12.
- CORPORATIONS:**
Capital stock: 6.
Laws relative to: 83.
List of: 104.
Number of: 52, 84.
Organization of: 91.
Property, valuation: 290.

COST OF LIVING, conditions as to: 705.

COTTON:

Imports: 12.

Exports: 14.

COTTON GOODS, imports: 12.

COURTS:

Administration of justice by: 617-624.

Cases tried: 632-672.

Work of: 628.

DAIRY PRODUCTS, imports: 12.

DEATHS:

Rate of: 25, 26, 50.

Number of: 133.

DENGUE, cases of: 159.

DENTAL EXAMINERS, work of: 31.

DEPOSITARIES, amount in: 295.

DIPHTHERIA, cases of: 158.

DISBURSEMENTS, insular: 292, 296.

DRUGS, imports: 12.

DYES, imports: 12.

DYSENTERY, cases of: 161.

EARTHQUAKES:

Donations for: 358.

Effects on education: 578.

Effects of: 454.

Damage done by: 3, 4.

Report on: 4.

EDUCATION:

Appropriations: 37, 600.

Budget: 581.

Condition of: 36.

Earthquake, effects of: 578.

English language: 550.

Enrollment: 36, 531, 585.

Expenditures: 532, 538-542.

Financial tables: 599.

Higher and professional: 554.

Historical review: 533.

Holidays: 574.

Industrial schools: 552.

Legislation: 581.

Officials, list of: 533.

Progress made: 49, 533.

Recommendations: 54, 582.

Salaries: 548.

School boards: 542.

School boards—

Bonds: 264, 266.

Finances: 601.

List of: 583.

Loans to: 264.

Receipts and disbursements: 245.

School buildings: 36, 439, 458, 532, 544, 595.

Schools, number of: 531.

School population: 36, 531.

School property, valuation: 532.

Spanish language: 552.

Statistics: 585.

Summer schools: 577.

Supervision: 559.

Teachers: 36, 531.

Teaching personnel: 557.

EDUCATION, COMMISSIONER OF, report of: 531-616.

ELECTRIC-LIGHT SYSTEMS, construction of: 465.

EMPLOYMENT AGENCY, work of: 704.

ENGLISH LANGUAGE, teaching of: 550.

ENTOMOLOGY DIVISION, work of: 694.

- ESTEVEs. GUILLERMO, report of: 397-530.
- EXCISE STAMPS, sales: 293.
- EXCISE TAXES:
 - Collections: 356.
 - Sources of: 394.
- EXECUTIVE SECRETARY, report of: 83-126.
- EXPENDITURES:
 - Distribution of: 400.
 - Statement: 253-263.
- EXPENSES, statement of: 253.
- EXPLOSIVES, imports: 12.
- EXPORTS, value of: 5, 8, 23.
- FACTORIES:
 - Inspection work: 712.
 - Number inspected: 712.
 - Wages: 712.
- FARM LOAN ACT, extension of: 689.
- FAVUS, cases of: 162.
- FERTILIZERS:
 - Inspection of: 692.
 - Imports: 12.
- FILARIASIS, cases of: 161.
- FINANCE:
 - Historical review: 345, 359.
 - Report of department of: 345-396.
- FINANCIAL EXHIBITS, statements: 251.
- FIRES, number of: 70.
- FISH, imports: 12.
- FLOUR, imports: 10.
- FOOD, prices of: 709.
- FOOD COMMISSION:
 - Audit of account of: 726.
 - Commercial transactions: 721.
 - Financial statement: 721, 728.
 - Regulations: 715.
 - Report of: 715.
 - Prices fixed by: 716.
 - Work of: 47.
- FORESTRY:
 - Work of division of: 701.
 - Protection of: 702.
- FORESTS:
 - Area of: 38.
 - Reserve: 7.
- FRANCHISES:
 - Approval of: 43.
 - Granting of: 45.
- FRUIT, Export: 18.
- FRUIT INDUSTRY, labor conditions: 706.
- FRUITS:
 - Imports: 12.
 - Exports: 14.
- FURNITURE, imports: 13.
- GLASSWARE, imports: 12.
- GRAPEFRUIT:
 - Exports: 18.
 - Investigation: 693.
- HAMS, imports: 13.
- HARBORS AND DOCKS:
 - Historical review: 499.
 - Report on: 40.
- HEALTH, conditions of: 50.
- HEALTH, COMMISSIONER OF, report of: 127-231.
- HIDES, exports: 14.
- HONEY, exports: 14.
- HOSPITALS, number of: 52.
- HUNTING, game law: 84.
- ILLITERACY, percentage: 49.

- IMPORTS, value of: 5, 6, 8, 21, 23.
- INCOME TAX, collections: 353.
- INCOME TAXES:
 - Law regulating: 346.
 - Statement of: 385-388.
- INDEBTEDNESS, interest bearing: 282.
- INFANTS, mortality: 26, 134, 222.
- INFLUENZA:
 - Appropriation for: 147.
 - Cases of: 7.
 - Deaths, from: 25, 145.
 - Effects of: 580.
 - Epidemic of: 131.
 - History of: 143.
- INSANE ASYLUM, report on: 26.
- INSTITUTE OF TROPICAL MEDICINE AND HYGIENE, work of: 28.
- INSTRUMENTS, imports: 12.
- INSULAR BOARD OF HEALTH, work of: 27.
- INSULAR GOVERNMENT:
 - Appropriations for: 298.
 - Funds of: 295.
 - Receipts and disbursements: 292, 296, 325.
 - Estimate of: 329.
- INSURANCE COMPANIES, transactions: 370.
- INTERIOR, COMMISSIONER, report of: 397.
- IRON, imports: 12.
- IRRIGATION, historical review: 510.
- IRRIGATION SERVICE, financial statement: 340.
- IRRIGATION SYSTEM:
 - Cost of: 50.
 - Operation of: 512-520.
 - Report on: 41.
- JUSTICE:
 - Administration, review of: 617-624.
 - Enforcement of: 42.
 - War activities of department: 625.
- JUTE BAGS, imports: 12.
- KERN, HOWARD L., report of: 617-683.
- LABOR:
 - Conditions as to: 37.
 - Construction work, inspection of: 704.
 - Cost of living: 705.
 - Employment agency: 704.
 - Laws, compliance with: 706.
 - Laws violated: 703.
 - Legislation effecting: 686.
 - Progress made: 686.
 - Recommendations: 707.
 - Shops inspected: 708.
 - Unemployed: 704, 711.
 - Work done by officials: 703.
- LABORERS:
 - Claims for wages: 712.
 - Dwellings for: 704.
 - Economic and social condition of farm: 705.
- LANDS, value of: 375.
- LANDS, PUBLIC:
 - Historical review: 471.
 - Leased: 485.
 - Location of: 472.
 - Survey: 40.
 - Survey: 483.
- LARD, imports: 12.
- LEATHER:
 - Exports: 14.
 - Imports: 12.

- LEATHER GOODS, imports: 12.
- LEGISLATION, laws passed: 57.
- LEGISLATURE:
 - Laws passed by: 24.
 - Sessions: 24.
- LEGISLATURE, sessions: 87.
- LEPROSY, cases of: 163.
- LIABILITIES, statement of: 251.
- LIBERTY LOANS:
 - Amount subscribed: 5.
 - Subscriptions: 358.
- LICENSE TAXES, amount of: 294.
- LIQUORS, imports: 13.
- LITIGATION, important: 629.
- LOANS:
 - Amount of: 7.
 - Municipalities: 263.
 - School boards: 263, 264.
- MALARIA:
 - Cases of: 142.
 - Deaths from: 26.
- MARKETS, number of: 52.
- MARRIAGES, number of: 205.
- MEATS:
 - Control of supply: 721.
 - Prices: 721.
 - Exports: 14.
- MEDICAL EXAMINERS, work of: 30.
- MEDICINES, imports: 12.
- MILITARY SERVICE, schoolmen in: 569.
- MILK:
 - Supply of: 719.
 - Imports: 13.
- MINERAL OILS, imports: 13.
- MOLASSES, exports: 14.
- MORTALITY, statistics: 132.
- MUNICIPALITIES:
 - Bonds: 265, 266.
 - Buildings constructed: 447.
 - Disbursements: 241.
 - Disbursements: 241.
 - Receipts: 239.
 - Expenditures: 390.
 - Finance: 354.
 - Government of: 35.
 - Laws affecting: 34, 35.
 - Indebtedness: 392.
 - Loans to: 263.
 - Bonds: 265.
 - Number of: 36.
 - Property—
 - Assessed value: 372.
 - Valuation: 290.
 - Receipts: 239, 388.
 - Roads, history: 431.
 - Taxes: 290.
- MUSEUM, report on: 689.
- MUSICAL INSTRUMENTS, imports: 13.
- NOTARIES PUBLIC, list of: 107.
- NUTS:
 - Imports: 12.
 - Exports: 14.
- OATS, imports: 12.
- OILS, imports: 6.

ORANGES:

Acreage planted in: 378.

Lands, value of: 373.

ORDINANCES, franchise, list of: 72.**PAINTS**, imports: 13.**PAPER**, imports: 13.**PARDONS**, number of: 25.**PAROLES**, number of: 25.**PASSEPORTS:**

System: 89.

Number issued: 89.

PASTURE:

Acreage of: 378.

Lands, value of: 373.

PATHOLOGY AND BOTANY DIVISION, work of: 695.**PERFUMERIES**, exports: 14.**PERSONAL PROPERTY**, assessed value: 375.**PICKLES**, imports: 13.**PIERS**, location of: 502.**PINEAPPLES**, area planted: 686.**POLICE:**

Personnel: 67.

Work of: 29.

POLITICAL CONDITIONS, progress: 53.**POPULATION**, estimated: 133.**PORK**, imports: 13.**PORTS**, collections: 336.**POTATOES**, cultivation of: 725.**PRISONERS**, number of: 674-682.**PRISONS**, conditions, review of: 617.**PROCLAMATIONS**, executive: 25.**PROGRESS**, historical review: 47.**PROHIBITION**, enforcement of: 42, 627.**PROPERTY:**

Assessments: 352.

Assessed value: 372, 532.

Taxes: 290.

Valuation: 290, 352.

PROSTITUTES, treatment of: 647.**PROSTITUTION**, report on suppression of: 636.**PUBLIC DEBT**, amount of: 50.**PUBLIC SERVICE COMMISSION**, work of: 45.**PUBLIC WORKS**, progress made: 397.**RAILROADS:**

Map of: 530.

List of: 434.

Mileage: 434.

REAL ESTATE:

Valuation of: 274.

Value and location of: 274.

REAL PROPERTY:

See Property.

Assessed value: 372.

RECEIPTS, insular: 292, 296.**RED CROSS**, collections: 358.**RESOURCES**, financial, historical review: 359.**REVENUE:**

Sources of: 350.

Statement of: 252.

REVENUES:

Estimate of: 365.

Historical statement: 362.

RICE:

Importation: 717.

Imports: 6, 10, 12.

Restrictions regarding: 716.

Sale of: 716.

ROADS:

- Construction: 269, 399, 406-420.
- Cost: 269.
- Expenditures: 39, 50.
- Expenditures for maintenance: 331.
- Historical review: 402, 420.
- Maintenance: 424.
- Map of: 530.
- Mileage: 49, 269.
- Municipal, history: 431.
- Recommendations: 430.

RUBBER, imports: 12.

RURAL CREDIT, extension of law: 54.

SAN JUAN:

- Harbor, work on: 41.
- Port, review of activities: 504.

SANITARY CODE, revision: 132.

SANITATION:

- Laws enacted: 128—.
- Organization: 128.

SCARLET FEVER, cases of: 158.

SCHOOLS:

- Taxes: 290.
- See Education.

SEEDS:

- Exports: 14.
- Imports: 13.

SEWER SYSTEMS:

- Construction of: 465, 467.

SILK, imports: 13.

SLAUGHTER HOUSES, number of: 52.

SMALLPOX, cases of: 157.

SOAP, imports: 13.

SOLER, A. RUIZ, report of: 127-231.

SPANISH LANGUAGE, use of: 552.

SPIRITS, exports: 14.

STEEL, imports: 12.

STONE, statement of amount and cost of: 528.

STRAW HATS, exports: 14.

STREET RAILWAYS, mileage: 435.

SUGAR:

- Exports: 14, 15, 23.
- Imports: 12.
- Prices: 716.
- Sale of: 719.
- Shipments: 5, 6.

SUGAR CANE:

- Area planted: 686.
- Acreage planted in: 378.
- Lands, value of: 373.
- Diseases of: 697.

SUGAR INDUSTRY, labor condition: 705.

TAXES:

- Amount pending: 288.
- Statement showing amount: 290.
- Distribution: 290, 292.
- Pending, statement of: 288.
- Rate of: 290.

TICK, eradication: 724.

TELEGRAPH, receipts and expenditures: 337, 492.

TELEGRAPH LINES:

- Historical review: 485.
- Map of: 530.
- Mileage: 40.
- Rates of charges: 493.
- Revenue: 40.

TELEPHONE LINES, map of: 530.

- TIMBER LANDS:
 - Value of: 373.
 - Acreage of: 378.
- TOBACCO:
 - Area planted: 686.
 - Acreage planted in: 378.
 - Lands, value of: 373.
 - Exportation: 396.
 - Exports: 14, 15.
 - Imports: 6, 13.
 - Shops and factories inspected: 710.
- TOBACCO INDUSTRY, labor condition: 705.
- TOILET PREPARATIONS, imports: 13.
- TOYS, imports: 13.
- TRADE-MARKS:
 - Laws relative to: 84.
 - Registration: 91.
- TRANSMISSIBLE DISEASES, cases of: 155, 200.
- TREASURER, report of: 345-396.
- TREASURY:
 - Condition of: 33.
 - Financial condition: 349.
- TRUST FUND, receipts and disbursements: 328.
- TRUST FUNDS, statement of: 277.
- TUBERCULOSIS:
 - Cases of: 148.
 - Deaths from: 26, 148, 151.
 - Measures against: 26.
- TYPHOID FEVER, cases of: 155.
- UNCINARIASIS:
 - Cases of: 151.
 - Deaths from: 26.
- UNIVERSITY OF PORTO RICO:
 - Board of trustees: 31.
 - Balance sheet: 284.
 - Equipment: 284.
 - Operating expenses: 285.
 - Balance sheet: 284.
 - Financial statement: 284.
 - Report of: 609.
- VEGETABLE OILS, imports: 13.
- VEGETABLES, imports: 13.
- VESSELS:
 - Number cleared: 504.
 - Value of: 381.
- VETERINARY EXAMINERS, work of: 31.
- VETO POWER, test case: 88.
- VICE, report on suppression of: 636.
- VITAL STATISTICS, tables showing: 206.
- WATER SYSTEMS, number of: 52.
- WATERWORKS:
 - Construction of: 464, 467.
 - Number of: 36.
- WEIGHTS AND MEASURES:
 - System of: 85.
 - Report on: 95.
- WHEAT FLOUR, imports: 12.
- WHOOPING COUGH, cases of: 161.
- WINES, imports: 13.
- WOOD, imports: 13.
- WOOL, imports: 3.
- WORKMEN'S RELIEF COMMISSION, work of: 44.
- YAGER, ARTHUR, report of: 54.

**REPORT OF THE GOVERNOR GENERAL OF THE
PHILIPPINE ISLANDS**

I

REPORT OF

THE GOVERNOR GENERAL OF THE
PHILIPPINE ISLANDS

JANUARY 1 TO DECEMBER 31, 1918

CONTENTS.

	Page
Report of the Governor General.....	3
Council of Defense.....	3
Philippine National Guard.....	6
Council of State.....	6
Philippine National Bank.....	7
Manila Railroad Co.....	7
National Coal Co.....	8
Fourth Philippine Legislature—Third Session.....	8
Government personnel.....	9
Finances of the Insular Government.....	9
Department of the Interior.....	11
Bureau of non-Christian tribes.....	11
Executive bureau.....	11
Philippine constabulary.....	12
Department of Public Instruction.....	12
Bureau of Education.....	12
Philippine Health Service.....	13
Department of Justice.....	13
Bureau of Prisons.....	14
Department of Finance.....	14
Bureau of Customs.....	14
Bureau of Internal Revenue.....	15
Treasury Bureau.....	15
Department of Agriculture and Natural Resources.....	16
Rinderpest and other pests.....	16
Rice cultivation.....	16
Bureau of Forestry.....	17
Department of Commerce and Communications.....	17
Bureau of Public Works.....	17
Bureau of Posts.....	18
Bureau of Supply.....	18
Bureau of Coast and Geodetic Survey.....	18
Report of National Coal Co.....	19
Report of the Secretary of the Interior.....	31
Organization.....	31
Personnel.....	31
Policy.....	32
Legislation.....	32
Non-Christian and special Provinces.....	33
General statement of conditions.....	34
General operation and activities.....	35
Law and order.....	36
Our organized Provinces and municipalities.....	37
Our non-Christian territory and inhabitants.....	38
Executive bureau.....	41
Bureau of non-Christian tribes.....	43
Bureau of Constabulary.....	43
Philippine General Hospital.....	44
Government Orphanage.....	45
Board of Pharmaceutical Examiners and Inspectors.....	46
Board of Medical Examiners.....	46
Board of Dental Examiners.....	46
Board of Optical Examiners.....	46
Public Welfare Board.....	46
City of Manila.....	47
City of Baguio.....	47

	Page.
Report of the Department of Mindanao and Sulú	49
Territorial jurisdiction.....	49
Population.....	50
Legislation.....	50
Policy of Government.....	52
Organization.....	53
Revenue collections, etc.....	58
Public order.....	70
Justice.....	72
Public health.....	74
Public instruction.....	75
Prisons.....	78
Public works.....	79
Agriculture.....	84
Public lands.....	88
Forest.....	89
Trading systems.....	90
Mineral products.....	90
Marine products.....	90
Commerce and shipping.....	91
Manufacture.....	92
Banks and credits.....	93
Immigration.....	93
Missions and other philanthropies.....	94
Political conditions.....	95
Personnel.....	95
Inspections.....	98
Christian, Mohammedan, and Pagan relations.....	98
Recommendations.....	98
Report of the Secretary of Public Instruction	103
Bureau of Education.....	103
Philippine Health Service.....	110
Epidemics.....	110
Other diseases.....	112
Hospitals.....	112
Provincial cemeteries.....	112
Sanitary work in the Provinces.....	112
Council of Hygiene.....	113
Food and drug inspection.....	113
Bureau of Quarantine Service.....	113
Private schools.....	118
Report of the Secretary of Finance	121
Bureau of the Treasury.....	124
General Treasury cash account.....	124
Special funds.....	128
Currency-reserve fund.....	128
Bonded indebtedness.....	130
Guaranty of interest on bond issues of railway corporations.....	130
Investments.....	130
Circulation.....	131
Banks and banking.....	131
Insurance.....	132
Bureau of Customs.....	132
General trade conditions.....	132
Foreign carrying trade.....	133
Trade with the United States.....	134
Imports.....	134
Cotton and its manufactures.....	134
Iron and steel.....	134
Rice.....	135
Other imports.....	135
Exports.....	135
Customs collections.....	137
Inspection of vessels.....	137

Report of the Secretary of Finance—Continued.

Bureau of Customs—Continued.

Marine officers.....	137
Documentation and licensing of vessels.....	137
Immigration and emigration.....	138
Secret service.....	138
Arrastre plant.....	138
Protests and appeals.....	138
Consular duties.....	139

Bureau of Internal Revenue.....

Collections.....	136
Apportionment of internal revenue taxes, etc.....	140
Cost of collection.....	142
Alcohol products.....	142
Tobacco products and matches.....	143
License, business and occupation taxes.....	144
Cedulas.....	145
Franchise taxes.....	145
Income tax.....	145
Pearl fishing.....	145
Sponge fishing.....	145

Bureau of Printing.....

Personnel.....	145
Vocation training.....	145
Fiscal operation.....	145
Appropriation.....	146

Report of the Secretary of Justice.....

Judiciary.....

Supreme Court.....	147
Courts of First Instance.....	148
Justice of the peace courts.....	148

General Land-Registration Office.....

Public Utility Commission.....

Bureau of Justice.....

Bureau of Prisons.....

Philippine Library and Museum.....

Report of the Secretary of Agriculture and Natural Resources.....

Bureau of Agriculture.....

Bureau of Forestry.....

Bureau of Lands.....

Bureau of Science.....

Weather Bureau.....

Agricultural colonies.....

Report of the Department of Commerce and Communications.....

Bureau of Public Works.....

Bureau of Posts.....

Bureau of Commerce and Industry.....

Bureau of Supply.....

Bureau of Labor.....

Bureau of Coast and Geodetic Survey.....

REPORT OF THE GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS.

JANUARY 1 TO DECEMBER 31, 1918.

MANILA, *September 25, 1919.*

SIR: I have the honor to submit a report of the conditions in the Philippine Islands for the calendar year 1918.

The activities of government here and the undivided sentiment of the people of the islands were devoted to loyal support of the United States in the prosecution of the great war. Every assistance required by the home Government and every effort which could be devised by the Filipino people were carried out with widespread enthusiasm and unstinted devotion. The attitude of the people here during these years of all-important achievement by the United States in the arena of war was a gratifying response to the practical development of American principles of justice in government in the Philippines. It was not only possible to withdraw a large part of the American military and naval establishments in the islands for necessary service elsewhere; it would have been entirely feasible to withdraw the entire American garrisons here and depend upon the Filipino people to defend American interests and the prestige of the American flag in the archipelago.

With notable self-restraint, the people during the war ceased all expression of their desire for independence, until after the signing of the armistice, when the national sentiment of the Filipinos again took form with the appointment by the legislature of a commission of leading citizens of the islands to present to the United States Congress their request for independence. The undersigned concurs in the belief of the Filipino people that they have now established the stable government demanded by Congress as a prerequisite for the granting of their independence, and has so reported to Congress together with an expression of his hope that early independence will be conceded.

COUNCIL OF DEFENSE.

Acting upon the suggestion of the Secretary of War, the undersigned appointed a committee to make recommendations for the organization of the council of defense for the Philippine Islands. The committee was composed of Gen. Ralph W. Jones, of the National Guard; Capt. Hugh Straughn, of the United States Army; Mr. W. H. Macfarlane, president and general manager of the Insular Lumber Co.; Mr. Julius S. Reis, president of the Manila Trading & Supply Co.; Mr. Vicente Morente, undersecretary of commerce and communications; and Mr. T. J. Wolff, a prominent business man.

In accordance with the recommendation of this committee, the undersigned, by Executive Order No. 25, series of 1918, named a number of Government officials and prominent residents of Manila as members of the Philippine Council of Defense.

The work undertaken by the council of defense was outlined in general as follows:

1. To inform the people as to the causes of the war and as to the aims of the United States in the war.
2. To handle campaigns for the Liberty loans, war savings stamps, and Red Cross drives.
3. To encourage economy.
4. To aid in the suppression of sedition.
5. Public welfare.

The work of the council met with a most gratifying response throughout the islands, and furthered the consolidation of the people into one homogeneous body, thus affording opportunity for more concrete expressions of national loyalty to the Government of the United States.

PHILIPPINE NATIONAL GUARD.

The organization of the Philippine National Guard, of which I made mention in my last report, was continued until November 20, when the President's call to the Federal service for a month's training came. The call was for the division as organized, with Brig. Gen. F. R. Day (colonel, United States Army), commanding the division, and First Brigade; Brig. Gen. Quinlan (major, United States Army), commanding the Second Brigade; and Brig. Gen. R. W. Jones commanding the Third Brigade.

Upon the recommendation of the militia commission the legislature, then in session, enacted a law voting insular funds for a further period of training of two months for the division. Shortly before the close of the period of training and in view of the impending termination of the war it became necessary to muster out this military unit, and this took place on February 19, 1919.

It should be noted that the organization of this division, composed of volunteers for service with the United States Army, comprised many of the best-educated young men in the islands, who were eager to offer themselves for duty at the front in support of the ideals of liberty, justice, and democracy which had brought our country into the war. While, unfortunately, the division was not ordered to active service, the moral and physical training afforded, and the patriotic feeling aroused were of the utmost benefit to the islands.

COUNCIL OF STATE.

In October, 1918, the council of state was organized by executive order of the Governor General, to advise him on matters of importance affecting the welfare of the country. The speaker of the house of representatives, Hon. Sergio Osmeña, and the president of the senate, Hon. Manuel L. Quezon, were appointed members of the council in addition to the heads of the executive departments. Mr. Osmeña was elected vice president of the council. Weekly meetings are held, thus superseding the regular cabinet meetings of the preceding two years.

PHILIPPINE NATIONAL BANK.

The bank has inaugurated during the year, in addition to the five branches already established (New York, Iloilo, Cebu, Corregidor, and Nueva Ecija), six more, to wit, in Aparri, Cagayan; in Davao, Mindanao; in Bacolod, Negros Occidental; in Legaspi, Albay; in Lucena, Tayabas; and in Shanghai, China. Within this year it is expected that necessary preparations will be completed for the establishment of new branches in Zamboanga, Mindanao; in Tacloban, Leyte; in Vigan, Ilocos Sur; and in Rosales or Lingayen, Pangasinan.

The net profits obtained during the year from branches in operation amounted to ₱1,488,807.62, representing 33.45 per cent of the total gain.

The following is a comparative statement of the resources of the bank covering the period May, 1916, to December 31, 1918:

May 23, 1916	₱11,800,000
July 15, 1916	29,300,000
Dec. 31, 1916	50,700,000
June 30, 1917	98,035,000
Dec. 31, 1917	138,276,000
June 30, 1918	210,924,000
Dec. 31, 1918	248,798,000

MANILA RAILROAD CO.

The receipts of the road from operation increased by ₱2,223,361.09 over those of last year.

The principal items making up this increased revenue are—

Increased passenger receipts	₱1,091,609
Increased express receipts	289,006
Larger volume freight handled	197,706
Freight rate increase (approximately)	621,200

The company reports that an upward revision of freight rates, imposed in July and October, produced additional revenue of approximately ₱621,200. The staple food supplies are, however, scarcely affected by the new tariff.

The company is able to handle the increased freight traffic through improvement of its terminal facilities at the Manila station and through the reconstruction and restoration of 187 freight cars, most of which had been out of service for a number of years. New cars and engines are being purchased in the United States.

The operating expenses for 1918 exceeded those for 1917 by ₱2,746,301.60, and this is accounted for as follows:

1. A greater consumption of fuel and supplies as a result of increased train mileage. Also the greatly increased cost of coal, the principal item of expense.

2. Supplies and materials increased in cost from 100 to 300 per cent over normal items.

3. The average increase in wages for unskilled labor was 25 per cent; for employees receiving a salary of ₱1,200 per annum or less, 44.87 per cent; for employees receiving a salary of more than ₱1,200 per annum, 27.64 per cent. The total for staff salaries was approximately the same as that for 1917.

4. Deferred maintenance, ₱450,000.

While the roadbed, rolling stock, and buildings were maintained in a serviceable condition throughout 1917, no attempt was made to recuperate from the effects of maintenance deferred in the three years next preceding, nor were extensive improvements undertaken. Last year's operations, however, showed a sufficient profit to warrant a more liberal expenditure on maintenance and improvements. Consequently, the directorate authorized a substantial outlay for reconstruction and betterment work.

The Tayug branch of the road was completed to San Quintin, a distance of 6,257 kilometers. The cost of the work is ₱267,631.93, including the purchase of right of way. The new extension is developing a large amount of traffic, and will add very materially to our operating revenue for 1919.

The Floridablanca branch was extended to Carmen, a distance of 4.26 kilometers, at an estimated cost of ₱87,000. The Carmen extension has been placed in operation and should produce a revenue of ₱300,000 per annum, derived mostly from the Del Carmen sugar central, which is now in course of construction.

NATIONAL COAL CO.

The work of the company for 1918 consisted largely in survey and construction work in the Sibuguey fields in Mindanao and the district north of Cebu. At the date of this writing the Cebu district is producing a small quantity of coal, which is marketed locally at ₱35 a ton and is used by the Philippine Railway Co. The Mindanao fields are much larger in extent and of a quality analyzed as superior to any other known in this part of the world. Railway tracks are now being laid from tidewater to the mines, shafts have been sunk, and a wharf is about to be erected. Considerable delay in beginning operation has been due to serious epidemics of pernicious malaria among the laborers, which the company now has under control. It is believed that the success of the National Coal Co. will solve the fuel problem of the Philippines and greatly increase the wealth and prosperity of the country. The report of the company for the fiscal year 1918-19 is submitted herewith.

FOURTH PHILIPPINE LEGISLATURE—THIRD SESSION.

Eighty-six bills were passed at the last session of the legislature, and all received executive approval. There were passed, also, four bills which, under the terms of the Jones law, were forwarded to the President of the United States for his approval. These are H. No. 1580, permitting, under certain conditions, certain foreigners to remain in the Philippine Islands, notwithstanding any other provision of law to the contrary; H. No. 1134, amending paragraph 200 of section 8 of the revenue act for the Philippine Islands approved by Congress on August 5, 1909; H. No. 1647, authorizing the National Development Co. to acquire mines and mining rights; and H. No. 1194, commonly known as the land bill, amending and compiling laws with reference to the public domain.

Among the more important acts passed are Act No. 2782, appropriating ₱30,705,824 for the extension of free elemental instruction

to all children of school age; Act No. 2792, amending the corporation law; Act No. 2793, providing for the acquisition of patents; Act No. 2803, authorizing the Governor General to designate any secretary or undersecretary to perform the functions of the secretary or undersecretary of any department in their absence; Act No. 2814, creating the National Petroleum Co.; Act No. 2833, amending the income tax; Act No. 2849, creating the National Development Co.; Act No. 2865, creating the National Cement Co.; and Act No. 2862, creating the National Iron Co.

GOVERNMENT PERSONNEL.

The number of persons examined by the bureau of civil service during the year 1918 was 12,239, of which 25 per cent passed. The number of competitors in Spanish examinations was but 474, of whom 24 per cent passed, as compared with 15 per cent in 1917. The changed conditions in the service may be illustrated by comparing these figures with those of 1905, when 3,555 Filipinos were examined in Spanish and 2,917 in English. In 1918, the figures were 474 in Spanish and 11,699 in English.

The number of original appointments made during the year as a result of examinations held in the Philippines was 1,829, compared with 1,315 in 1917 and 1,612 in 1916. Of these 14, or a little less than 1 per cent, were Americans, compared with 32 in 1917 and 33 in 1916. Only four of these were, strictly speaking, original appointments, the remaining 10 representing merely a change of status of persons already in the service from unclassified or temporary to classified and permanent positions. During the 12 months ending July 1, 1918, the number of Americans in the service decreased by 362 (compared with 420 during the preceding 12 months), and the number of Filipinos increased by 1,007. The number of voluntary separations of Americans during 1918 included 150 retired during the year; of the 28 involuntary separations, 12 were for cause, 5 because of reduction in force or abolition of position, and 11 by reason of death—of this latter the estates of 3 were granted the benefit of the retirement gratuity.

FINANCES OF THE INSULAR GOVERNMENT.

The government finances are in a more firm and stable condition than at any period in the history of the Philippines.

The auditor's report, which is printed as a separate document, shows that the current surplus of liquid capital of the insular government increased during the year 1918 in the sum of ₱11,194,061, thereby creating a total of ₱35,598,744, of which ₱24,832,714 is unappropriated. The increase in current surplus exceeded that for 1917 in the sum of ₱1,821,537. The net resources of the insular government comprising reserves and current surplus, appropriated and unappropriated, show an increase for the year of ₱16,661,196. The problem of how best to keep the money in circulation to prevent an undue proportion being locked up in the treasury through the increasing tendency of current surplus has been solved by the government, partly, in the increase of the public works bill for 1919, which is nearly ₱8,000,000 greater than that of 1918, and the appropriation

of over ₱30,000,000 expendable in five years for the purpose of extending the facilities of free elemental instruction, and partly in the investment to be made in permanent assets through the creation of the National Development Co. and other industrial companies created by the legislature, the majority stocks of which are to be financed by the government. The most notable increases in the expense of the central government during 1918 were in connection with the national guard and in the aid to Provinces and municipalities. These contributions to the local governments in the sum of ₱10,150,455, as against ₱8,974,049 in the preceding year are made to assist in the construction and maintenance of highways, bridges, artesian wells, hospitals, schools, and other public works; for primary school instruction and to meet recurring deficiencies in the local revenues of certain specific Provinces and municipalities.

Among the principal factors on which the continued financial dependence of regularly organized Provinces and municipalities upon the central government to finance their various aforementioned activities is based, are (a) inequitable distribution of the general income, especially the proceeds of license and business tax; (b) under-assessment of real property coupled with low tax rate; and (c) real property exemptions. The auditor reports also a net increase in the general expense of the government of ₱3,724,155, due almost wholly to increase in cost of materials and supplies, as well as labor hire, brought about by war and after-war conditions.

Consolidated budget statement, fiscal year 1918, compared with fiscal year 1917.

[Including all departments, bureaus, offices, Provinces, municipalities, cities, and other political subdivisions.]

Items.	Fiscal year 1918.	Fiscal year 1917.	Increase (+); decrease (-).
Budget credits:			
<i>Revenue from taxation.....</i>	<i>₱62,492,754.52</i>	<i>₱52,717,327.02</i>	<i>+ ₱9,775,427.50</i>
Excise taxes.....	13,191,923.35	12,933,425.77	+ 258,497.58
Import duties.....	13,479,736.56	11,183,522.41	+ 2,296,214.15
Licenses and business tax.....	17,441,487.20	12,652,927.83	+ 4,788,559.37
Real estate tax.....	7,347,571.21	6,956,902.41	+ 390,668.80
Cedula tax.....	4,659,916.00	4,741,966.00	- 82,049.00
Wharfage tax.....	1,305,477.59	1,137,622.26	+ 167,855.33
Franchise tax.....	1,130,439.23	824,751.18	+ 305,688.05
Income tax.....	2,550,149.20	1,175,006.50	+ 1,372,142.70
Documentary stamp tax.....	847,067.52	682,692.29	+ 164,375.23
Road tax.....	89,334.00	107,338.00	- 18,004.00
Immigration tax.....	207,752.00	152,232.00	+ 55,520.00
Tonnage dues.....	157,756.42	152,690.49	+ 5,065.93
Inheritance tax.....	75,127.74	5,284.93	+ 69,842.81
Other.....	9,016.50	7,665.95	+ 1,350.55
<i>Incidental revenue.....</i>	<i>6,630,491.25</i>	<i>5,712,051.69</i>	<i>+ 918,439.56</i>
Fines and forfeitures.....	1,655,491.74	1,828,356.06	- 172,864.32
United States internal revenue.....	1,919,753.11	1,253,851.23	+ 665,901.88
Revenue from public forests.....	588,984.98	487,666.04	+ 101,318.94
Municipal grants of fishery privileges.....	358,671.60	324,023.32	+ 34,648.28
Cattle registration fees.....	661,515.00	640,070.00	+ 21,445.00
Property and mining claims registration fees.....	75,434.10	79,163.79	- 3,729.69
Sales and rentals of public domain.....	103,423.13	70,957.64	+ 32,465.49
Other.....	1,267,217.57	1,027,964.48	+ 239,253.09
<i>Earnings and other credits.....</i>	<i>29,264,603.52</i>	<i>24,678,115.32</i>	<i>+ 4,586,488.20</i>
Operating revenue of commercial and industrial units.....	21,395,238.13	17,406,716.58	+ 3,988,521.55
Other income of operating units.....	94,838.07	71,847.47	+ 22,990.60
Dividends on bank stock.....	495,589.63	314,786.78	+ 180,802.85
Income from U. S. A. T. freight service.....	.....	337,470.62	- 337,470.62
Income incidental to functional activities.....	3,423,212.93	2,795,665.37	+ 627,547.56
Sales of fixed property.....	384,739.56	140,856.58	+ 243,882.98
Sales of Friar Lands real estate.....	856,666.26	870,822.19	- 14,155.93
Sales of San Lazaro real estate.....	214,299.52	229,246.63	- 14,947.11
Unadjusted insular aid credits.....	500,148.66	.....	+ 500,148.66
Interest on loans and bank deposits.....	342,624.48	211,917.92	+ 130,706.56

Consolidated budget statement, fiscal year 1918, etc.—Continued.

Items.	Fiscal year 1918.	Fiscal year 1917.	Increase (+); decrease (—).
Budget credits—Continued.			
<i>Earnings and other credits—Continued.</i>			
Interests repayments from railway companies	P 290,202.06	.....	+ P 290,202.06
Proceeds from loans	807,400.00	P 1,774,900.00	— 967,500.00
Voluntary contributions from the public	178,908.92	173,769.06	+ 5,139.86
Sales of agricultural bank loans	164,140.00	.....	+ 164,140.00
Other credits	35,466.60	55,216.30	— 19,749.70
Credit adjustments—prior year	81,038.80	194,899.82	— 113,861.02
Total budget credits	98,387,749.27	83,007,493.90	+ 15,380,255.37
Budget charges:			
Salaries	25,052,869.62	23,071,722.37	+ 1,981,147.25
Wages	9,940,858.47	7,788,313.99	+ 2,152,544.48
Consumption of supplies and materials	11,318,041.08	8,896,455.61	+ 2,421,585.47
Postal, telegraph, telephone, and cable service	549,745.30	468,755.19	+ 80,990.11
Rental of buildings and grounds	428,449.43	378,332.47	+ 50,116.96
Freight, express, and delivery service	622,233.08	540,843.72	+ 81,389.36
Travel expense of personnel	2,616,958.54	2,197,235.65	+ 419,722.89
Illumination and power service	781,894.97	714,532.09	+ 67,362.88
Printing and binding reports, documents, and publications	258,767.59	201,222.48	+ 57,545.11
Discretionary expenditures	67,431.39	50,068.58	+ 17,362.81
Contributions and gratuities (other than to local governments)	483,127.22	454,275.05	+ 28,852.17
Retirement gratuities, act 2599	785,903.66	584,353.28	+ 201,550.38
Administrative expense	28,895.88	20,063.86	+ 8,832.02
Engineering subcontracts	173,419.39	327,886.67	— 154,467.28
Insurance losses	297,161.21	59,475.52	+ 237,685.69
Debit adjustment—prior year	17,448.62	173,720.37	— 156,271.75
Extraordinary losses	88,853.80	44,815.88	+ 44,037.92
Repair service	6,372,891.39	4,615,187.42	+ 1,757,703.97
Interest on bonded and loan debt	1,835,600.55	1,835,084.99	+ 515.56
Other expense	4,044,969.11	2,514,061.48	+ 1,530,907.63
Purchase of fixed property	2,622,038.87	1,835,829.78	+ 786,209.09
Public works construction projects	11,580,822.10	8,348,105.62	+ 3,232,716.48
Other permanent investments	8,721,142.04	1,983,228.68	+ 6,737,913.36
Interest on railroad bonds under guaranty contracts	683,920.00	733,674.96	— 49,754.96
Payments to sinking funds	1,126,811.94	1,061,645.13	+ 65,166.81
Repayments of loans	1,176,984.00	1,125,924.00	+ 51,060.00
Provincial loans to exchange stores	132,824.76	28,500.00	+ 104,324.76
Total budget charges	91,830,064.01	70,073,314.84	+ 21,756,749.17
Increase in current surplus for the year	6,557,685.26	12,934,179.06	— 6,376,493.80
Add—Current surplus at the beginning of the year	36,278,502.63	23,344,323.57	+ 12,934,179.06
Current surplus at the end of the year (see balancesheet)	42,836,187.89	36,278,502.63	+ 6,557,685.26

DEPARTMENT OF THE INTERIOR.

HON. RAFAEL PALMA, secretary; HON. TEODORO M. KALAW, undersecretary.

BUREAU OF NON-CHRISTIAN TRIBES.

The functions of this important bureau were ably administered by Hon. Frank W. Carpenter, governor of the Department of Mindanao and Sulu, and particular attention is invited to his report, which is printed herewith, and which contains a complete and interesting account of the condition of affairs within his jurisdiction.

EXECUTIVE BUREAU.

The chief of this bureau reports that during the year 1918 real property assessments in Batangas, Pampanga, and Tarlac were completely revised so that there are now 21 Provinces, the real property

assessments of which have been revised in accordance with the assessment law.

During the year 21 Provinces were visited by provincial agents and were in general found to be in a satisfactory condition.

By executive orders of the Governor General, 18 new municipalities were organized, effective January 1, 1919.

This bureau has been of great assistance to the bureau of agriculture in the campaign against locust and rinderpest, to the bureau of health in the eradication of epidemics, to the bureau of coast and geodetic survey in securing geographical data, and to the bureau of non-Christian tribes in promoting the general welfare of the non-Christians.

PHILIPPINE CONSTABULARY.

The chief of constabulary reports a very satisfactory condition of peace and order throughout the Archipelago. Even in northern Luzon, where contact between Christians and non-Christians was frequent, no disturbance of any sort has occurred. With the surrender of the Negrito leader Domingo Angcot, on February 27, 1918, the unrest among the people of the mountains of Zambales has ceased.

On December 31, 1917, the commissioned officers of the Philippine Constabulary consisted of 102 Americans and 256 Filipinos, as compared with 39 Americans and 308 Filipinos on December 31, 1918. A large number of the American officers of the constabulary resigned from that organization to join the United States Army during the recent war.

DEPARTMENT OF PUBLIC INSTRUCTION.

Hon. CHARLES E. YEATER, secretary; Hon. ALEJANDRO ALBERT, undersecretary.

BUREAU OF EDUCATION.

To do away with the unfair burden imposed upon the parents of school children in the form of tuition fees, to abolish class distinction, and to extend the privilege of free attendance in all public schools to all children of school age, the Philippine Legislature passed Act No. 2782, appropriating ₱30,705,824. Upon the recommendation of the department of public instruction, this liberal appropriation was made to spread over a period of five years. This was advantageous because the great sum involved could not be adequately disposed of in a much shorter period.

As a result of the 20 years continued teaching of English, many thousands of young men and women now entering the activities of life in government and commerce possess a good knowledge of the English language.

The following is a comparative statement of the number of primary, intermediate, and secondary schools in the islands, and the annual and monthly enrollment and daily attendance of each:

Year.	Primary.	Inter- mediate.	Secondary.	Total.
1918.....	4,276	423	48	4,747
1917.....	4,248	368	46	4,702
Annual enrollment:				
1918.....	592,568	64,306	14,529	671,398
1917.....	607,682	56,884	11,482	675,998
Average monthly enrollment:				
1918.....	49,386	5,362	1,209	56,057
1917.....	507,226	50,306	10,063	567,625
Average daily attendance:				
1918.....	455,754	53,232	12,391	521,377
1917.....	457,888	47,230	9,650	514,768

The great demand for teachers led the legislature to authorize the secretary of public instruction to establish new normal schools in Cebu, Laoag, Albay, and Iloilo.

Gardening and planting of fruit and seed trees have been encouraged and required of all children. There are now 138 institutions for the study of agriculture, of which 9 may be properly termed agricultural schools, 12 are farm schools, and 117 are settlement farm schools. Besides these there is the Agricultural School at Muñoz, the pride of Central Luzon.

PHILIPPINE HEALTH SERVICE.

On December 31, 1918, Dr. J. D. Long, the director of health, resigned, and Dr. Vicente de Jesus, the assistant director, was designated acting director of health. The year 1918 was characterized by the appearance of serious epidemics. Of smallpox there were registered in Manila 1,326 cases and 869 deaths, and in the Provinces 40,126 cases and 12,951 deaths. The spread of this disease was due to two causes—the bringing over to Manila, in December of 1917, of two native sailors who had been rescued from shipwreck and happened to develop smallpox upon their landing; in that same month an English sailor from Nankin, China, arrived in Manila and developed smallpox the next day. A vaccination campaign was at once undertaken, but due to lack of vaccine virus it did not accomplish the desired result. It is now estimated that by the end of the year 1919 the vaccination of the people of the islands will have been completed—thus thereby practically ending the ravages of this epidemic.

Influenza occurred twice during the year, in May and June and in October and November. Deaths were due to complications of pneumonia and of diseases of the heart and other organs. Cholera also appeared in the Provinces during the year, but its effects were less disastrous than those of the previous year.

DEPARTMENT OF JUSTICE.

Hon. VICTORINO MAPA, secretary; Hon. JOSE ESCALER, undersecretary.

To fill the vacancy caused by the resignation of Justice Fred C. Fisher from the supreme court bench on September 5, 1918, Hon. Percy M. Moir, judge of the court of first instance for the seventh judicial district, was appointed on November 21, 1918.

During the year 1,316 cases were filed in the supreme court, making an increase of 248 cases over the number of cases filed during the previous year. There was also an increase of 542 in the number of cases disposed of, and a decrease of 810 in the number of cases pending at the end of the year.

The department of justice reports with regret the death of Hon. Ponciano Reyes, late judge of the twenty-sixth judicial district, who perished in the shipwreck of the S. S. *Quantic* on Christmas eve.

The resignations of Hon. John S. Powell, judge of the twenty-third judicial district, effective May 1, 1918; of Hon. William E. McMahon, judge of the eleventh judicial district, effective June 13, 1918; and of Hon. Carter D. Johnston, judge of the twenty-first judicial district, effective July 1, 1917, were accepted.

To fill the vacancies thus created, Hon. Diego Gloria, assistant attorney general, was made judge of the second judicial district, effective February 13, 1918; Hon. Louis M. Southworth, a prominent member of the Philippine bar, judge of the twenty-third judicial district, effective June 20, 1918; and Assistant Director of Posts Primitivo San Agustin, auxiliary judge for the second group of judicial districts, effective July 10, 1918.

BUREAU OF PRISONS.

Upon the resignation of Assistant Director C. J. Thompson, Dr. B. G. Monreal was appointed to succeed him on October 1, 1918.

At the end of the year the prison population of the Philippine Islands consisted of 6,463, of whom 2,635 were confined in Bilibid, 1,052 in Iwahig Penal Colony, 593 in San Ramon Penal Farm, 788 working at Corregidor, 19 in constabulary stations, 53 (insular) working at provincial jails, 37 in San Lazaro Insane Asylum, 4 in City Boys' Reformatory School, 32 in Luneta police station, 1,250 in provincial jails.

Certain improvements have been made in the Iwahig Penal Colony during the year. New roads and buildings were constructed. Eight thousand coconut trees have been planted, and a considerable increase in live stock has been recorded.

Despite the high cost of materials and the scarcity of transportation facilities, it is gratifying to note that the industrial division of the bureau of prisons made during the year 1918 a net profit of ₱56,986.12, which is an increase of ₱1,326.42 over that of 1917.

DEPARTMENT OF FINANCE.

Hon. ALBERTA BARRETTO, secretary; Hon. MIGUEL UNSON, undersecretary.

BUREAU OF CUSTOMS.

The report of the insular collector of customs, which is printed as a separate document, shows that the total value of our foreign trade for the year 1918 amounted to ₱467,587,387, as compared with ₱322,802,674 for the preceding year. The increase is due to greater home production of hemp, coconut oil, sugar, and tobacco products. This is the largest figure ever known in the Philippines. It left a balance

of trade in favor of the islands of ₱73,190,541. The trade balances of 1916, 1917, and 1918 aggregate the considerable sum of ₱144,065,600, or a net balance in favor of the islands of ₱106,444,417 during the two decades of American administration.

Trade with the United States during the past year has increased tremendously as compared with previous years. Imports show an increase of ₱42,407,927 and exports ₱51,825,120 over those recorded in 1917. Trade with England and France has been heavily checked by the war, while that with Japan, China, French East Indies, Australasia, and Spain has increased materially.

BUREAU OF INTERNAL REVENUE.

The collections for the year 1918 amounted to ₱48,508,163.65, as compared with ₱39,937,370.91 for the year 1917, showing an increase of 21.46 per cent.

The total output of distilled spirits during the year 1918 was 15,931,402 proof liters, while that during the year 1917 was 15,073,758 proof liters.

The output of tobacco products has also increased. Taxes during the year 1917 were collected on 488,897 kilos in comparison with 661,569 kilos during the year 1918. Taxes on imported smoking and chewing tobacco have also increased, 389,869 kilos having been imported in 1917, while 446,723 kilos were imported in 1918. The exports of smoking tobacco, however, were less during the year, 35,924 kilos having been exported in comparison with 42,817 kilos in 1917.

Through Government advertising, Manila cigars secured a ready market in America. In 1916 when the tobacco inspection law, Act No. 2613, was passed, export of cigars to the United States was 114,006,746. In 1917 it was 216,124,310, and in 1918 it was 264,871,253.

₱164,344.65, as franchise taxes, accrued to the insular treasury, ₱105,504.25 to the city of Manila and other municipal treasuries, and ₱3,346.23 to the provincial treasuries.

The income tax also increased. As against ₱1,182,888.33 collected in 1917 ₱2,571,575.29 were collected in 1918. The increase was not due to changes in the law but rather to the improved condition, and hence increased earnings of taxpaying corporations and individuals.

TREASURY BUREAU.

The total funds for which the insular treasurer was accountable on December 31, 1918, was ₱173,353,582.94, which sum was distributed as follows: In treasury vaults, \$1,070,590.46, United States currency; and ₱14,399,442.39, Philippine currency; on deposit with local banks, on open account, ₱60,846,586.01, Philippine currency; and on time deposit, ₱3,888,669.94, Philippine currency; on deposit with depositaries in the United States, \$46,038,851.84, United States currency.

On August 16, 1918, pursuant to the provisions of Act No. 2776, which was made effective on that date, the gold standard fund and the silver certificate reserve fund were merged to form a new fund—the currency reserve fund—so that the function of maintaining the

parity of the Philippine currency and of redeeming treasury certificates that have been issued now devolves upon the superseding fund. The amount of this fund on December 31, 1918, was ₱112,549,208.73. This sum less the minimum of the fund on the same date, ₱102,824,160.64, made an excess balance of ₱9,727,048.09.

The flourishing condition of trade and business in the Philippine Islands is reflected in the increased resources of the banks. At the end of the year 1916, they amounted to ₱121,954,154, and by that of 1917, ₱239,247,726, while by that of 1918, ₱399,807,941.

The money in circulation on December 31, 1918, amounted to ₱131,151,883.03 as compared with ₱102,580,313.57 on December 31, 1917.

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES.

HON. GALICANO APACIBLE, secretary; HON. RAFAEL CORPUS, undersecretary.

In the Philippines 1918 was a banner year for agriculture. The six leading crops of the islands, namely, rice, abaca, sugar, coconuts, corn, and tobacco made a total of ₱350,000,000 as against ₱241,000,000 for 1917, which means a net gain for the year of ₱109,000,000. This was the highest figure ever obtained since the creation in 1913 of the statistical division in the bureau of agriculture. As compared with that for the previous five-year period, the year 1918 scored even a greater gain of ₱181,000,000 in value, an increase of 371,000 hectares planted to the above-mentioned leading crops, and an increased yield in kilos and liters of 1,434,000,000. There was a slight decrease in hectareage and in yield of corn, but, even then, its value showed satisfactory gain.

RINDERPEST AND OTHER PESTS.

Rinderpest, which assumed serious proportions in 1916, has abated in virulence. During the year 1918 there were recorded 21,586 cases and 15,747 deaths, as compared with 33,971 cases and 26,951 deaths in 1917.

Most of the Provinces did not suffer from the locust pest, Buluan, in Cotabato, Mindanao, being the only municipality badly ravaged. By this time the pest has practically disappeared.

Abaca pests appeared in some regions, especially in Laguna. To avoid their spread an order was issued, prohibiting the transportation of abaca plants to other noninfected Provinces.

RICE CULTIVATION.

During the year 1918 much attention was given to rice cultivation in the islands. One million three hundred and sixty-eight thousand one hundred and forty hectares were cultivated, 2,684,628,000 liters produced, valued at ₱135,163,375, resulting in an increase of 192,000 hectares in cultivation, an increase in yield of 1,200,000,000 liters, and an increase in value of ₱74,000,000, all over the average of the previous five years. The gain in value over the record crop of 1917 was ₱53,000,000, in round numbers. The average yield per hectare for 1918 established a new record of 26.16 cavans, as against 19.41 cavans per hectare for the previous five years.

BUREAU OF FORESTRY.

The bureau has materially increased its activities and has done all it could to protect forest resources, especially the mangrove swamps, and it is hoped that it will succeed in its laudable work of establishing mangrove forest reserves.

DEPARTMENT OF COMMERCE AND COMMUNICATIONS.

Hon. DIONISIO JAKOSALEM, secretary; Hon. VICENTE MORENTE, undersecretary.

The long-felt need of the government to have a separate bureau or office to which may be intrusted the successful development of Philippine trade, not only in these islands but also in foreign countries, was met with the passage by the Philippine Legislature on January 31, 1918, of Act No. 2728, entitled "An Act creating the bureau of commerce and industry, defining its functions, making appropriations therefor, and for other purposes." To head this newly created bureau, Mr. James J. Rafferty was made director, and Mr. Fidel A. Reyes, assistant director. Director Rafferty having been authorized to make a survey of the commercial field in the United States, Mr. Fidel A. Reyes was made acting director.

To meet the demands of increased commercial activities, this department recommends that government equipment for port works be continually increased, that radio stations be established in all important ports, and that liberal appropriations be made for the establishment of commercial agencies abroad. For the proper distribution of laborers, the department likewise recommends the encouragement of interisland migrations. And, to the end that the constant differences between labor and capital may be amicably settled in the interest of the parties concerned as well as that of the public, it also recommends the establishment in the Philippines of compulsory arbitration.

BUREAU OF PUBLIC WORKS.

No other bureau has suffered more in loss of personnel, on account of the recent war, than the bureau of public works. Of the 11 American designing engineers 10 temporarily joined the National Guard and the Officers' Reserve Corps of the United States Army; of the 29 American district engineers, 13 temporarily left the service; and 4 Filipino engineers enlisted in the National Guard. Moreover, former Directors E. J. Westerhouse and Claude Russell successively left the service. On December 31, 1918, technical employees numbered 125, only 37 of whom were Americans and the rest were Filipinos.

First-class roads have been built in all Provinces and their extension is well under way. A plan to consolidate the various provincial road systems was also adopted and, accordingly, interprovincial and intercoastal roads are now under construction. Despite the lack of materials in the local market, four notable bridges have been completed during the year.

Port works were begun on Piers Nos. 3 and 5, Manila; in the reclamation dock area of Cebu; in Tacloban, Leyte; in Iloilo; in

Catbalogan and Catarman, Samar; and in several ports of Mindanao and Sulu. The bureau has recommended an increase in government equipment for port works so that the islands might meet the demands of increased industrial and commercial activities incident to after-war times and the general economic awakening of the world.

The number of new motor vehicles registered during the year was 1,301, and 6,078 were presented for reregistration. This makes a total registration of 7,379 as compared with 6,024 in 1917.

BUREAU OF POSTS.

The bureau of posts has been maintained upon a self-sustaining basis, the records showing that the net earnings of the bureau for 1918 amounted to ₱722,417.58, as against ₱170,335.11 for 1917.

During the year a parcel-post convention was concluded between the Government of the Philippine Islands and that of North Borneo. A similar convention was concluded between the United States and the Portuguese colonies of Macao and Timor, in which the Philippine Islands has the privilege of participating. Another similar convention is pending between Japan and the Philippines.

BUREAU OF SUPPLY.

Mr. Charles H. Magee, the purchasing agent, was granted an extended leave of absence from June 9, 1918, to June 7, 1919, and since January 10, 1918, Mr. Cipriano E. Unson has been in charge of the bureau as acting purchasing agent.

During the year, despite unfavorable commercial conditions then prevailing, the volume of work handled by the bureau was the greatest ever recorded. Combined purchases and sales amounted to ₱25,506,217.63, making an increase of ₱6,595,327.15 over that of 1917.

BUREAU OF COAST AND GEODETIC SURVEY.

With the exception of the director, who, in conformity to law, has always been an American, being an officer of the United States Coast and Geodetic Survey, the personnel of the bureau has been entirely Filipino since 1917, numbering 26 in all.

In general this bureau was greatly handicapped in the operations throughout the year owing to the increased cost of supplies and the transfer of the officers of the United States Coast and Geodetic Survey to active service with the Army and Navy.

The undersigned was granted leave of absence to visit the United States, and left the Philippines December 9, 1918. Vice Gov. Charles E. Yeater acted as Governor General from that date until the return of the undersigned on August 27, 1919.

Respectfully submitted.

FRANCIS BURTON HARRISON,
Governor General.

The SECRETARY OF WAR,
Washington, D. C.

EXHIBIT A.

REPORT OF NATIONAL COAL CO.

MANILA, September 13, 1919.

TO THE STOCKHOLDERS OF THE NATIONAL COAL CO.,

Manila, P. I.

GENTLEMEN: On behalf of your board of directors, and pursuant to section 3 of Article V of the by-laws, the undersigned has the honor to submit for your consideration a report and financial statement of the National Coal Co. during the fiscal year 1918-19.

Personnel.—In the fiscal year covered by the present report we had to overcome the same difficulties that we had been struggling against during the previous year.

On January 1, 1919, we accepted the resignation of Mr. C. H. French as general manager, and it was not until March 1 of the same year that we were able to secure the services of Mr. Russell, who is at present holding said office.

On June 1, 1919, the resignation of Mr. H. I. Shoemaker, the engineer, was accepted, and in his stead Mr. E. J. Hulsema was appointed as engineer of the Sibuguey district, Malangas, Zamboanga.

During the war it was absolutely impossible to secure the services of a mining engineer from the United States, and only a month ago it was possible to engage Mr. Frank Dalburg, who ought to arrive at Manila within a few days.

Amendment to the law creating the National Coal Co.—Act No. 2822 of the Fourth Philippine Legislature amended sections 2, 4, and 6 of act No. 2705, entitled "An act to create the National Coal Co." in the sense of granting to said company priority of rights to obtain forest products for its own use and of directing the Governor General to subscribe on behalf of the government of the Philippine Islands at least 51 per cent of the company's capital stock.

Financial status.—On May 19, 1919, his excellency the Governor General subscribed 14,509 shares, which, added to the 15,300 shares subscribed on March 22, 1917, make up a total of 29,809 shares pertaining to the government of the Philippine Islands, out of the 30,000 shares issued pursuant to the law creating the company.

Herewith are inserted schedules which illustrate the status of the company's capital stock, its assets and liabilities as of June 30, 1919, and its operation during the fiscal year 1918-19.

Schedule showing the status of capital stock as of June 30, 1919.

Subscribers.	Number of shares.	Capital percentage.	Amount.	Paid.	Unpaid.
Government of the Philippine Islands.....	29,809	99.334	P2,980,900	P1,820,100	P1,160,720
Public (24 persons).....	189	.63	18,900	13,020	5,000
Total subscribed capital stock.....	29,998	99.994	2,999,800	1,834,000	1,165,800
Unsubscribed capital stock.....	2	.006	200		200
Total.....	30,000	100.00	3,000,000	1,834,000	1,166,000

Statement showing the subscriptions to the capital on June 30, 1919.

Shareholders.	Number of shares.	Amount.	Amount paid on subscriptions.	Balance unpaid.
The government of the Philippine Islands.....	29,809	P2,980,900	P1,820,180	P1,160.72
Vicente Madrigal.....	1	100	100	
C. H. French.....	1	100	100	
Rafael Corpus.....	1	100	100	
Milton E. Springer.....	1	100	100	
Dalmacio Costas.....	1	100	100	
Eleuterio E. Matute.....	4	400	400	
Anselmo Hilario.....	10	1,000	1,000	
Alfonso Mañalac.....	1	100		
Alejandro Ruiz.....	1	100	50	50
Pedro Lozada.....	5	500	500	
Felix S. Salas Rodriguez.....	10	1,000	1,000	
Domingo M. Nieto.....	10	1,000	1,000	
Manuel de la Rama Coull.....	2	200	200	
Cornelia de la Victoria de la Rama.....	2	200	200	
R. de la Rama Coull.....	1	100	100	
Pablo B. Herrera.....	1	100	100	
Placido Flores.....	1	100	100	
E. de la Rama Coull.....	1	100	100	
Esteban Respall Coull.....	1	100	100	
M. Coull de la Rama.....	1	100	100	
E. J. Haborer.....	100	10,000	5,000	5,000
Rosalía Enage.....	1	100	70	30
P. J. Moore.....	20	2,000	2,000	
Hilton Carson.....	10	1,000	1,000	
Fortunata R. Salas.....	2	200	200	
Total.....	29,998	2,999,800	1,834,000	1,165.80

Consolidated balance sheet as of June 30, 1919.

ASSETS.

Fixed assets: Cost of mine development, buildings, machinery, improvements, equipments, etc.....	P371,722.30
Constructions in progress: Cost of constructions projects.....	639,383.89
Subscriptions to capital stocks: Balance of unpaid subscriptions to capital stock.....	1,165,890.00
Working assets: Materials and supplies, advance, and prepayments.....	192,216.45
Current assets (other than cash): Merchandise and coal inventories, accounts receivable.....	62,006.01
Cash: On hand, in banks, and branches.....	145,360.56
Suspense debits: Investigation and exploration and organization expenses.....	504,207.28
	3,080,796.51

LIABILITIES.

Capital:	
Capital stock authorized.....	P3,000,000.00
Less unissued and unsubscribed stocks.....	200.00
Capital stock subscribed.....	2,999,800.00
Current liabilities: Accounts payable, depository creditors, and unpaid wages.....	80,996.51
	3,080,796.51

Consolidated balance sheet as of June 30, 1919, compared with June 30, 1918.

Items.	June 30, 1919.	June 30, 1918.	Increase (+), decrease (-).
ASSETS.			
Real property:			
Buildings and structures.....	P11,262.30	P3,417.16	+ P7,845.14
Telephone lines.....	8,821.51		+ 8,821.51
Mine development.....	55,948.59		+ 55,948.59
Farms and gardens.....	1,683.88		+ 1,683.88
Total real property.....	77,716.28	3,417.16	+ 74,299.12
Equipment:			
Locomotives and cars.....	11,877.09	11,036.47	+ 840.62
Watercraft and appurtenances.....	155,715.47	62,259.07	+ 93,456.40
Power plants and machinery.....	41,885.50	18,226.92	+ 23,658.58
Instruments, tools, and implements.....	28,947.35	8,532.83	+ 20,414.52
Office and domestic equipment.....	35,846.28	6,418.82	+ 29,427.46
Miscellaneous equipment.....	19,734.33	17,760.15	+ 1,974.18
Total equipment.....	294,006.02	124,234.26	+ 169,771.76
Working assets:			
Construction work in process.....	639,383.89		+ 639,383.89
Materials and supplies.....	113,714.39	15,559.64	+ 98,154.75
Advances to contract employees.....	12,264.73	2,205.03	+ 10,059.70
Prepayments.....	66,237.33	24,721.82	+ 41,515.51
Total working assets.....	831,600.34	42,486.49	+ 789,113.85
Current assets (other than cash):			
Stores merchandise.....	25,657.45	18,258.04	+ 7,399.41
Coal inventory.....	19,859.64		+ 19,859.64
Stock subscriptions.....	1,165,800.00	926,720.00	+ 239,080.00
Accounts receivable.....	16,488.92		+ 16,488.92
Total current assets (other than cash).....	1,227,806.01	944,978.04	+ 282,827.97
Current assets (cash):			
Philippine National Bank.....	62,874.74	59,187.07	+ 3,687.67
Treasury cash.....	4,278.06	234,473.06	- 230,195.01
Cashiers' accounts current.....	59,974.95		+ 59,974.95
Disbursing agents' advances.....	10,992.95	1,400.12	+ 9,592.83
Cash in transit.....	7,229.89	4,125.10	+ 3,114.79
Total current assets (cash).....	145,360.58	299,185.35	- 153,824.77
Suspense debits:			
Investigation and exploration.....	504,307.28	147,115.19	+ 357,192.09
Total all assets.....	3,080,796.51	1,561,416.49	+1,519,380.02
CAPITAL AND LIABILITIES.			
Capital:			
Capital stock authorized.....	3,000,000.00	3,000,000.00	
Less capital stock unissued.....	200.00	1,457,100.00	+1,456,900.00
Capital stock subscribed.....	2,999,800.00	1,542,900.00	+1,456,900.00
Current liabilities:			
Accounts payable.....	43,465.92	18,516.49	+ 24,949.43
Depository creditors.....	1,017.41		+ 1,017.41
Unclaimed wages and accrued pay roll.....	36,512.18		+ 36,512.18
Total current liabilities.....	80,996.51	18,516.49	+ 62,480.02
Total capital and liabilities.....	3,080,796.51	1,561,416.49	+1,519,380.02

Detailed balance sheet, June 30, 1919.

Accounts.	Central office.	Sibuyan district.	Cebu district.	Total.
ASSETS.				
Real property:				
Buildings and structures.....		P10,527.16	P735.14	P11,262.30
Telegraph, telephone, and cable lines.....		6,250.74	2,570.77	8,821.51
Mine development.....		34,721.85	21,226.74	55,948.59
Farms and gardens.....		1,683.86		1,683.86
Total real property.....		53,183.63	24,532.65	77,716.28
Equipment:				
Locomotives and cars.....		11,036.47	840.62	11,877.09
Watercraft and appurtenances.....		155,715.47		155,715.47
Power plants and machinery.....		37,885.50	4,000.00	41,885.50
Instruments, tools, and implements.....	P23.57	23,323.45	5,530.33	28,947.35
Office and domestic equipment.....	7,291.89	22,462.15	5,092.24	35,846.28
Miscellaneous equipment.....	3,870.65	8,464.12	7,399.56	19,734.33
Total equipment.....	11,256.11	250,887.16	22,862.75	294,006.02
Working assets:				
Construction work in process.....		528,987.84	110,396.03	639,383.89
Materials and supplies.....	2,923.15	91,035.38	19,755.86	113,714.39
Advances to contract employees.....		12,222.73	42.00	12,264.73
Prepayments.....	617.47	63,248.26	2,371.60	66,237.33
Total working assets.....	3,540.62	695,494.23	132,565.49	831,600.34
Current assets (other than cash):				
Stores merchandise.....		25,657.45		25,657.45
Coal inventory.....		1,461.87	18,897.77	19,899.64
Stock subscriptions.....	1,165,890.00			1,165,890.00
Accounts receivable.....		1,641.05	14,847.87	16,488.92
Total current assets (other than cash).....	1,165,890.00	28,760.37	33,945.64	1,227,806.01
Current assets (cash):				
Philippine National Bank—Zamboanga warrant account.....		53,860.84		53,860.84
Philippine National Bank—Cebu warrant account.....			1,312.11	1,312.11
Philippine National Bank—Manila warrant account.....	7,701.79			7,701.79
Treasury cash.....	4,278.05			4,278.05
Cashiers' accounts current.....		35,501.47	24,473.48	59,974.95
Disbursing agents' advances.....	500.00	6,652.95	3,840.00	10,992.95
Total current assets (cash).....	12,479.84	96,015.26	29,625.59	138,120.69
Interdepartmental accounts current (see contra).....	1,713,281.13	2,185.77	17,163.90	
Suspense debits:				
Investigation and exploration account.....	95,476.94	425,914.80	(18,914.01)	502,477.73
Organization account.....			1,829.55	1,829.55
Funds and property in transit.....		7,239.89		7,239.89
Total suspense debits.....	95,476.94	433,154.69	(17,084.46)	511,547.17
Total assets.....	3,001,834.64	1,568,691.11	242,911.58	3,080,796.51
LIABILITIES.				
Capital stock:				
Capital stock authorized.....	3,000,000.00			3,000,000.00
Capital stock unissued.....	(200.00)			(200.00)
Total capital stock subscribed.....	2,999,800.00			2,999,800.00
Interdepartmental accounts current (see contra).....		1,490,873.51	241,767.29	
Current liabilities:				
Accounts payable.....	2,034.64	40,965.47	465.81	43,465.92
Depository creditors.....		597.56	419.85	1,017.41
Pay-roll account.....		36,254.87	34.00	36,288.87
Unclaimed wages.....			222.61	222.61
Total current liabilities.....	2,034.64	77,817.60	1,144.27	80,996.51
Total liabilities.....	3,001,834.64	1,568,691.11	242,911.58	3,080,796.51

Statement showing the sources of funds and their applications.

FROM JULY 1, 1918, TO JUNE 30, 1919.

Sources of funds:

Cash on hand—June 30, 1919.....	P295,060.25
Prepayments (cash in transit).....	4,125.10
Collections from stock subscriptions.....	1,217,820.00
From 1917-18 subscriptions.....	P926,640.00
From 1918-19 subscriptions.....	291,180.00
Accounts payable.....	62,480.02
Total.....	1,579,485.37

Applications of funds:

Investments—	
Real property.....	P74,299.12
Equipment.....	169,771.76
Working assets.....	789,113.85
Current assets (other than cash).....	43,747.97
Cash in treasury, banks, and in hands of officers.....	1,076,932.70
Expenditure—Investigation and exploration.....	145,360.58
Total.....	1,579,485.37

FROM MARCH, 1917, TO JUNE 30, 1919.

Sources of funds:

Collections for stock subscriptions.....	1,834,000.00
In 1917-18.....	P616,180.00
In 1918-19.....	1,217,820.00
Accounts payable, June 30, 1919.....	80,996.51
Total.....	1,914,996.51

Applications of funds:

Investments—	
Real property.....	P77,716.28
Equipment.....	294,006.02
Working assets.....	831,600.34
Current assets (other than cash).....	62,006.01
Cash in treasury, banks, and in hands of officers.....	1,265,328.65
Expenditure—Investigation and exploration.....	145,360.58
Total.....	1,914,996.51

Ratio of investments and expenditures during the fiscal year 1918-19 to capital stock and resources.

Investments and expenditures.	Amount invested.	Capital authorized, P3,000,000.	Capital subscribed, P2,999,800.	Capital paid up. P1,834,000.	Resources in 1918-19. P1,579,485.37.
		<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Real property.....	P74,299.12	2.4766	2.4768	4.0473	4.7040
Equipment.....	169,771.76	5.6590	5.6590	9.2569	10.7485
Working assets.....	789,113.85	26.3738	26.3755	43.0269	49.9602
Current assets (other than cash)....	43,747.97	1.4583	1.4583	2.3853	2.7697
Total Investments.....	1,076,932.70	35.8977	35.8996	58.7164	68.1824
Investigation and exploration.....	357,192.09	11.9064	11.9072	19.4761	22.6145
Cash on hand.....	145,360.58				9.2031
Total.....	1,579,485.37	47.8041	47.8068	78.1925	100.0000

Ratio of investments and expenditures as of June 30, 1919, to capital stock and resources.

Investments and expenditures.	Amount invested.	Capital authorized, ₱3,000,000.	Capital subscribed, ₱2,999,800.	Capital paid up, ₱1,834,000.	Total resources, June 30, 1919, ₱1,914,996.51.
		<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Real property.....	₱77,716.28	2.5905	2.5907	4.2375	4.0583
Equipment.....	294,006.02	9.9002	9.8008	16.0308	15.3528
Working assets.....	831,600.34	27.7200	27.7218	45.3435	43.4259
Current assets (other than cash).....	62,006.01	2.0690	2.0670	3.3809	3.2879
Total investments.....	1,265,328.65	42.1776	42.1803	68.9927	66.0748
Investigation and exploration.....	504,307.28	16.8102	16.8114	27.4977	26.3346
Cash on hand.....	145,360.58				7.5906
Total.....	1,914,996.51	58.9878	58.9917	96.4904	100.0000

Details of construction in process as of June 30, 1919.

Details.	Total.	Sibuguey district.	Cebu district.
Buildings and structures.....	₱192,099.85	₱189,314.29	₱2,785.56
Railway.....	323,192.30	219,765.12	107,427.18
Docks.....	11,758.32	11,758.32	
Tramway.....	19,186.15	19,186.15	
Installation of machinery.....	13,655.65	13,655.65	
Fabrication of materials.....	2,566.28	2,566.28	
Sanitary improvements and water supply.....	8,097.08	8,097.08	
Miscellaneous construction improvements.....	3,883.87	3,883.87	
General engineering expenses.....	51,185.06	51,185.06	
	625,624.16	515,411.42	110,212.74
Maintenance and repairs.....	5,875.63	5,692.34	183.29
Shop expenses.....	7,884.10	7,884.10	
Total carried to balance sheet.....	639,383.89	528,987.86	110,396.03

Schedule of constructions in progress as of June 30, 1919.

	Total.	Sibuguey district.	Cebu district.
Construction projects:			
Salaries.....	₱38,476.95	₱33,870.88	₱4,606.07
Wages.....	198,088.03	130,609.20	67,478.83
Subsistence of laborers.....	72,662.69	72,662.69	
Recruiting expense.....	35,915.81	35,908.45	7.36
Health and sanitation.....	19,657.56	19,301.62	355.93
Consumption of material and supplies.....	178,884.06	158,672.11	20,211.95
Rentals.....	56.13		56.13
Postage and telegrams.....	136.14	136.14	
Travel expense.....	2,083.42	1,941.26	142.16
Company's launch service.....	8,582.16	8,582.16	
Freight contracts.....	2,395.92	491.90	1,904.02
Construction contracts.....	44,880.54	44,880.54	
Repair contracts.....	4.00		4.00
Taxes.....	314.60	314.60	
Surveying and drafting.....	5,079.46		5,079.46
Power plant expense.....	994.95	994.95	
District accounting.....	5,811.70	4,347.52	1,464.18
District administration.....	17,579.02	8,239.61	9,349.41
Miscellaneous service.....	1,896.46	92.02	1,794.44
General district expense.....	7,935.17	6,961.06	974.11
Total construction projects.....	641,426.36	527,906.71	113,519.65
Maintenance and repairs (construction).....	5,875.63	5,692.34	183.29
Shop expense (construction).....	7,884.10	7,884.10	
	655,186.09	541,483.15	113,703.04
Less completed constructions transferred to fixed assets accounts.....	15,801.20	12,495.29	3,305.91
Total carried to balance sheet.....	639,383.89	528,987.86	110,396.03

Schedule of suspense debits as of June 30, 1919.

	Total.	Central office.	Sibuguey district.	Cebu district.
Investigation and exploration:				
Expenses during the year ended June 30, 1919.....	₱363,755.94	₱48,684.11	₱315,071.83	
Operation of S. S. Mayo.....	16,393.57		16,393.57	
Total for the year ended June 30, 1919.....	380,149.51	48,684.11	331,465.40	
Deduct district earnings (see operating statements).....	24,786.97		3,814.63	₱20,972.34
Organization expenses: Cebu district.....	355,362.54	48,684.11	327,650.77	(20,972.34)
	1,829.55			1,829.55
Net total for the year ended June 30, 1919..	357,192.09	48,684.11	327,650.77	(19,142.79)
Add balance June 30, 1918.....	147,115.19	46,792.83	98,264.03	2,068.33
Total carried to balance sheet.....	504,307.28	95,476.94	425,914.80	(17,084.46)

Cebu district operating account for the year ended June 30, 1919.

Coal sales.....	₱101,679.02
Less—Cost of coal sold:	
Mine operation—	
Mining.....	₱84,192.47
Loading and hauling.....	4,244.66
General mine expense.....	927.67
	₱89,364.80
Deduct—Coal inventory.....	18,397.77
	70,987.03
Gross earnings from coal sales.....	30,711.99
Add—Miscellaneous revenues:	
Operation of S. S. Mayo.....	882.24
Miscellaneous income.....	18.05
	900.29
	31,612.28
Deduct—Expenses:	
Coal merchandising expense.....	10,225.01
General accounting expense.....	70.85
General administration.....	296.74
Extraordinary charges.....	47.34
	10,639.94
Net earnings carried to investigation and exploration account...	20,972.34

Sibuguey district merchandise store and miscellaneous revenue account for the year ended June 30, 1919.

Merchandise sales.....	₱119,093.76
Less—Cost of merchandise sold.....	105,308.23
	13,785.53
Gross earnings on merchandise sales.....	1,518.97
Add—Miscellaneous income.....	
	15,304.50
Deduct—Expenses—	
Salaries.....	₱5,822.57
Wages.....	469.50
Materials and supplies used.....	211.01
Travel expense.....	94.49
Freight contracts.....	21.12
Taxes.....	697.21
Health and sanitation.....	38.94
Company launch service.....	2,227.06

Deduct—Expenses—Continued.

Subsistence of laborers.....	₱170. 76
District accounting	18. 19
Extraordinary charges.....	1, 719. 02
	<u>₱11, 489. 87</u>

Net earnings carried to investigation and exploration account	3, 814. 63
---	------------

Sibuguey district.—The development of the Sibuguey coal field was decided upon after a careful study of the meager data available regarding all Philippine coals. Coal from the Sibuguey region seems to have none of the unfavorable qualities of that produced in other Philippine localities, and a large quantity of it exists in the Gotas-Butong district. Whether this coal can be mined economically can not be determined as yet. Among the maps accompanying this report there is attached a study of the J. G. White coal claims in Danao, Cebu Province. This study was made by a competent engineer at a very considerable expense, rumored to have been about ₱75,000. Attention is invited to this report in order to give an idea as to the extensive work required in really exploring a coal field. Had similar work been carried out in Mindanao over the very large area that is being considered there, at least three years' time would have been required as well as a very large amount of money.

The area of the Sibuguey coal field is so great that the relatively small amount of exploration and development work accomplished is hardly sufficient to warrant a statement as to the quantity of coal available. It seems that a blanket vein of coal once covered the entire peninsula, but has been lost to a very large extent through erosion. Large areas not yet disturbed by erosion still exist, and in the Butong-Gotas region there is good evidence of a continuous 5-foot vein over an area of about 2,000 hectares, which means about 30,000,000 tons of coal. No. 2 vein has been discovered by drilling at a depth of about 80 feet below the surface in Butong. This vein is 14 feet thick. A coal outcrop that may be the No. 2 vein is found at a distance of 4 kilometers from Butong in the Lumbug region. If this No. 2 vein is to be found over the whole region, the quantity of coal available is immense.

The quality of the coal is best shown by the reports of samples analyzed recently. Representative analyses of Australian, Chinese, and Japanese coal are included for comparative purposes.

Report of coal analyses.

	Karatsu, Japan.	Chin- wan'fac, North China.	New Castle, Aus- tralia.	Gotas, River, seam No. 14.	Camp Butong, Bumbug Creek seam.
Moisture.....per cent.	5. 10	2. 50	2. 29	1. 54	2. 14
Volatile combustible matter.....do.	36. 83	24. 35	33. 39	26. 83	14. 13
Fixed carbon.....do.	49. 75	50. 99	53. 78	65. 78	81. 69
Ash.....do.	10. 82	12. 16	10. 54	5. 73	3. 04
Sulphur (determined separately).....do.				. 93	. 96
Coking quality.....	Non- coking.	Non- coking.	Non- coking.	Coking	Non- coking.
Total calories.....	8, 969	7, 029	7, 028	8, 231	8, 961
Total British thermal units.....	12, 545	12, 652	12, 650	14, 816	14, 942

The original idea as to the development of the Sibuguey district called for a port at Payao on the west coast of Sibuguey Peninsula. It has been the intention of the management to utilize the Sibuguey River, which empties into Sibuguey Bay about 3 miles north of Payao, as a means of transportation while the coal fields were being explored, and also, in so far as possible, as a means of transporting coal to tidewater. By clearing out the river the company was able to transport their equipment and supplies inland as far as Gotas, where the more extensive development work has been carried out. From Gotas it is about 3½ kilometers by trail across a small range of hills to Butong, which is apparently the best possible location for a permanent mine. While the Sibuguey River could be used for transporting supplies inland it was not possible to use

it to transport coal to market in commercial quantities. For the past year, the company could have marketed as much as 50 tons of coal daily if transportation facilities from the mine to the coast had existed.

As soon as it developed that Butong was the most advantageous location for the mine, it was decided to provide a railroad for transporting the product to the coast as soon as possible. Malangas, on the east coast of the peninsula, was selected as the best site for the water terminal of the railroad. In December, 1918, a start was made toward transferring Payao headquarters to Malangas. By February of this year, practically all of the work at Payao had been abandoned and all the energies of the company's forces were concentrated in the construction of the Malangas-Butong Railroad. Arrangements were made in January for recruiting 2,000 laborers for construction and it was hoped that the railroad might be finished by September or October of this year. Laborers were furnished transportation for themselves and families and paid at the rate of ₱1 a day with subsistence. Single laborers are fed at the mess, while married men are furnished a ration of meat and rice. The subsistence costs about ₱0.40 per day per man.

There will be a set of coal bunkers at Malangas at the wharf and the necessary coal-handling machinery to load ships rapidly and economically. By the proposed railroad, it is about 11½ kilometers from Malangas to Butong, but on additional kilometer and a half of rail will be required at Malangas as a material track from the proposed wharf to the lines which connect to the coal bunkers. A timber wharf will be constructed at first with about 25 feet of water alongside at low tide. This will be replaced in the future with a concrete wharf with 30 feet of water.

The grading for the railroad has been completed as far as kilometer 6 and considerable clearing has been carried on beyond this point. About 50 per cent of the ties required have been purchased, and timber contractors are busy on the remainder of the order. A construction tramway is being laid from Malangas to Butong and considerable coal can be taken out over this line before the railroad is completed. The severe epidemic of malaria and the time lost in obtaining equipment from the United States have been the principal difficulties that have been encountered. In order to give a general idea of the time required to secure equipment, a list is given below showing the date that some of our orders were placed and the date they were received. Not only have the shipments been extremely slow, but they have been incomplete, the missing cases usually being the most necessary part of the consignment. Note that, out of eight items, two have not arrived at all and three are incomplete.

Item.	Date ordered.	Date received.	Remarks.
Wireless.....	June 19, 1918	Dec. 7, 1918	Short generator.
Diamond drill No. 1.....	Aug. 14, 1918	May 15, 1919	About 33 per cent short.
Track scales.....	Dec. 10, 1918	Sept. 6, 1919	Complete.
Railway spikes.....	Dec. 24, 1918	July 8, 1919	Do.
150 tons rails.....	Dec. 10, 1918	Aug. 27, 1919	Short bolts and splices.
Diamond drill No. 2.....	Dec. 17, 1918	July 8, 1919	Complete.
Locomotive.....	Dec. 10, 1918	Not yet received.	
25 cars.....	do.....	do.....	

The town of Malangas as it exists to-day consists of about 20 family quarters for employees, 2 mess houses for employees, a considerable number of temporary hospital buildings, a school, constabulary barracks, several large barracks for laborers, and about 100 detached houses for laborers and their families. A gravity waterworks has been installed and there is a cinematograph, bakery, a 2-ton ice and refrigerating plant, and a small machine shop. A large area is being cultivated as a kitchen garden, where considerable success is being had in the production of vegetables for laborers' rations.

Health conditions.—As is usual in a new country, the health conditions on the average have been very bad. The mining camps at Butong and Gotas have been constructed with the idea of protecting the laborers from malaria. The houses are screened and all employees are provided with mosquito nets and suitable bedding. Here the general health has been fair, the percentage of sickness not being great enough to interfere with the work. When construction first started at Malangas there were no mosquitos in evidence, and the

camp has continued to this date without going to the expense of mosquito protection. A construction camp was built about 1 kilometer from the coast, where it was thought conditions would be as good as Malangas. From the time the work started in this camp cases of malaria appeared occasionally, but it was not until about 1,200 men were sent to the camp to reside that a serious outbreak occurred. Very shortly after the camp was occupied about 900 of the men became sick with malaria. Conditions were so serious that the camp was abandoned, the laborers returning to Malangas. Hospital facilities were very meager, and until the proper temporary buildings could be constructed conditions were extremely unfavorable. Two thousand men have been recruited, mostly in Cebu and Siquijor, and sent to Malangas at an expense of about ₱40 each. Of this 2,000 men, about 600 broke their contract and escaped, largely on account of fear of malaria, 900 became sick, of whom 300 died; 600, or practically all of those who contracted the malaria, had to be sent back to their homes because they were physically unfit for work. The management estimates that about ₱50,000 of the money spent for recruiting was lost, due to the laborers' inability to render any service to the company, and at least ₱80,000 was spent in medical attendance, burial expenses, and traveling expenses of those who were returned home. It was necessary to establish a receiving station in Cebu, where the convalescents were kept on their way from Malangas to their homes. The health authorities required this temporary hospital to prevent the spread of malaria in Cebu Province.

The actual money spent on account of the epidemic described above will probably reach the total of ₱150,000, but it must be borne in mind that this sum represents only a small part of the real damage suffered. The completion of the work was delayed by at least five months, which means a big loss on overhead charges as well as a chance of loss due to a possible drop in the price of coal. Future labor recruiting will be difficult and expensive, in fact it would be almost impossible to obtain another 2,000 men within a reasonable time. It is believed that no further trouble need be expected from similar epidemics in Sibuguey, but if it is found that malaria still exists, a very large expenditure will be required in mosquito extermination. Such operations call for extensive drainage and clearing large areas of all trees, brush, and even cogon grass. On account of the dense growth about all the camps in Sibuguey, such work would cost an immense sum.

The following is a general summary of the important features of the work in Mindanao during the past fiscal year. The construction camp and headquarters were moved from Payao to Malangas. It being impossible to market coal without a means of transportation, the construction of a railroad was started from Malangas to Butong. This work is 50 per cent completed, all the material and rolling stock has been ordered and should be in Manila by October 20. The railroad should be completed and in operation by March 1, 1920. From that date, the company should market 50 tons of coal a day with a gradual increase to a large production. Making due allowance for writing off the cost of the development work, the coal should not cost over 10 pesos a ton on the wharf in Malangas.

Cebu district.—The operations in Cebu have been less extensive but more productive than those carried on in Mindanao. The property locally known as the "Coto Angeles" has been taken over from the owners and due to the cheap labor in Cebu has produced coal almost from the very beginning. This property has been known for a long time and various attempts to exploit the mines have been made. In 1871, Don Isaac Conui obtained a concession from the Spanish Government and did considerable work on the claims. Before abandoning the property, he produced 1,600 tons of coal which he sold to the Spanish gunboats operating out of Cebu Harbor. In 1891, Don Ram6n Montanes obtained control of the property and constructed a tramway from the mines to Compostela together with a wharf for loading purposes. He produced about 6,000 tons of coal before the revolution of 1898 stopped the work.

The completed work in Cebu will consist of an extension of the Philippine Railway to the barrio of Basac, a distance of about 7 kilometers. An aerial cableway 4 kilometers long will be installed from Basac to the mines. The original plan called for a narrow-gauge railroad instead of the aerial cableway. The idea of constructing a narrow-gauge road was abandoned in order to avoid excessive construction and maintenance expenses. It is estimated that the total cost of the completed transportation system in Cebu, together with the necessary mine development work, will be less than ₱500,000. During the fiscal year the

company has produced over ₱100,000 worth of coal in Cebu, which has been sold at an average of ₱35 per ton. The mining costs only have averaged ₱6.41 per ton for the coal produced and that blocked out in the mine ready for production. The transportation cost on the completed system will be less than ₱2 per ton from the mine to Cebu, although it has cost over ₱20 per ton by the cargador system used at present.

Health conditions in Cebu have been excellent. Labor has been cheap and plentiful, the supervision has been reduced to a very small percentage of the total cost, and in consequence the railroad grade has been completed with very creditable economy. Mr. Regner, the district agent, should be congratulated for the good results that he has obtained. The railroad track should reach Basac by October 1, and it will require a very short time to complete the aerial cable. We should be able to haul coal from Licos to Cebu over the completed transportation system during the month of November.

The quantity of coal available at Licos is small from a mining standpoint, probably less than 4,000,000 tons. It is quite probable that the supply will be exhausted within a few years. For this reason every effort should be made to secure additional coal lands in Cebu if we desire to continue operations there.

Respectfully submitted.

THE BOARD OF DIRECTORS,
By C. H. FRENCH,
Vice President.

REPORT OF THE SECRETARY OF THE INTERIOR.

JANUARY 1 TO DECEMBER 31, 1918.

THE GOVERNMENT OF THE PHILIPPINE ISLANDS,
DEPARTMENT OF THE INTERIOR,
Manila, July 8, 1919.

SIR: I have the honor respectfully to submit the following report of the operations of the department of the interior for the year ending December 31, 1918.

A. ORGANIZATION.

This is the second annual report of the department of the interior since the reorganization of the executive departments of the Government pursuant to the provisions of Act No. 2666 of the Philippine Legislature. The organization of the department has not suffered any material change. The same bureaus and offices which were under its executive control and supervision in 1917 have remained under its jurisdiction in 1918, with the exception of the charity wards, which have been taken over by the bureau of health, and the board of pharmaceutical examiners, which has been reorganized and thereafter named the board of pharmaceutical examiners and inspectors. A new board of examiners, known as the board of optical examiners, has been created, while the welfare board has been reorganized and placed under the department of the interior. Then there are other functions and duties enjoined upon it by different legislation, appropriate mention of which and of the works done thereunder is elsewhere made in this report.

It may be seen, therefore, that at the end of the year 1918, the department of the interior had executive control and supervision over the following bureaus and offices:

1. Executive bureau.
2. Bureau of non-Christian tribes.
3. Bureau of constabulary.
4. Philippine General Hospital.
5. Government orphanage.
6. Board of pharmaceutical examiners and inspectors.
7. Board of medical examiners.
8. Board of dental examiners.
9. Board of optical examiners.
10. Welfare board.
11. City of Manila.
12. City of Baguio.

The operations and activities of each of the foregoing bureaus and offices are described in their respective reports, which are forwarded herewith, and no attempt will be made to go fully into the details of the work done by such bureaus and offices.

B. PERSONNEL.

Hon. Rafael Palma has continued to act as secretary of the department and Hon. Teodoro M. Kalaw as undersecretary. The subordinate personnel has remained the same as last year, except that a new clerk has been added.

Under the provisions of the reorganization act "there shall be in each department an undersecretary, who shall perform such duties as may be assigned to him by the secretary of the department and such as may be imposed upon him by law. When a department secretary is unable to perform his duties owing

to illness, absence, or other cause, or in case of a vacancy in the office, the respective undersecretary shall temporarily perform the duties of said office."

It often happens, however, that both the secretary and undersecretary of a department are absent, and, as may be noted, the law does not provide a method for designating any other official who may temporarily perform the functions and duties thereof. To remedy this and the other defects found in the reorganization of the executive departments, Act. No. 2803 was enacted. This act provides, among other things, for the appointment of one or more undersecretaries for each department as the annual appropriation acts may authorize, and empowers the Governor General to designate the secretary or undersecretary of any department to take charge of another department whose secretary or undersecretaries are unable to perform the duties of the office owing to illness, absence, or other cause.

C. POLICY.

The policy of the department as outlined in its last annual report has been strictly adhered to and no material change has been introduced except that during the year there has been an accentuation of the work of cooperation with the other departments especially in connection with the rice crisis and the food production campaign, the problem of transportation, and the health and school problems. Then there has also been taken further steps in connection with our policy toward the betterment of non-Christian people. Aside from the policy of compulsory school attendance, the department has heretofore favored the policy of compulsory fixed residence for our backward inhabitants irrespective of age. But experience has shown that it is futile to attempt to solve the non-Christian problem by such a method. It is indeed very doubtful for a mature non-Christian accustomed to the entirely untrammelled habits of nomadic or seminomadic life to survive compulsory change to orderly life with fixed place of habitation and the exactions of more or less systematic field labor. There are doubtless individual instances in which this has been accomplished, but we must deal with the general rule of the mass rather than the individual exception. Furthermore, if it be possible to accomplish successfully such transformation by groups of mature men and women, experience has shown that it can not be done by personnel such as the Government is ordinarily able to secure and retain. The solution, therefore, of our problem of amalgamating the wild non-Christians must be sought by a method which from time immemorial has been successful in the domestication of both men and beasts; that method of course is by bringing them very young into the environment which simulates as nearly as possible that which is intended to be the habit of subsequent mature life.

D. LEGISLATION.

As has been stated in the chapter dealing with organization, there are other functions and duties enjoined upon the department of the interior by different legislation. To get a clear idea of those functions and duties and in order to be able to make a survey of the works done thereunder, it is deemed proper to enumerate the legislation in question.

Act No. 2715, "the militia act." While this act was enacted and approved on March 17, 1917, and the first organization of the Philippine Militia took place in that year, yet the year 1918 saw much of the activities of the organization especially in connection with the offer to the United States for service during the war of a contingent of 25,000 Filipino militiamen. Properly speaking, the Philippine Militia is not a part of the department of the interior, but the secretary of the interior has been the chairman of the militia commission since the operation of the law, and this makes mention thereof advisable.

Act No. 2723, an act providing for the adoption of necessary and efficacious measures for increasing the agricultural production of foodstuffs and appropriating funds for this purpose. This act was enacted on November 28, 1917. The intervention of the department of the interior in the work is contained in section 5 thereof, which reads as follows:

"The secretary of agriculture and natural resources is hereby authorized to issue such rules and regulations as may be necessary to carry out the purpose of this act and, on the petition of a majority of the provincial boards of the Provinces regularly organized under the provisions of the provincial government act, and in case of such petition being approved by the secretary of the

interior, he may issue an order which shall be as general as possible within each Province, fixing the minimum quantity of foodstuffs that each family or individual must produce within a given period * * *."

During the year 1918 no action has ever been taken under the above-quoted provisions of law.

Act No. 2725, an act authorizing the secretary of the interior to establish a school of nursing in the southern island hospital division, as a dependency of the School of Nursing of the Philippine General Hospital, and for other purposes. This act was enacted on December 18, 1917. Pursuant to the authority vested in the secretary of the interior by the above-cited act, this office on January 9, 1918, issued Department Order No. 13, establishing a school of nursing in the southern island hospital division, subject and subordinate to the School of Nursing of the Philippine General Hospital.

Act No. 2727, appropriation act for the year 1918. There are numerous items in the 1918 appropriation act which pertained to the department of the interior. But mention shall be made only of those which had important bearing on the policy of the department.

- | | |
|---|---------|
| (a) Discretionary expenses of the secretary of the interior for such purposes as he may consider necessary for establishing and promoting friendly relations with the non-Christian inhabitants of the Philippine Islands and for furthering their agricultural, industrial, economic, and social development and their progress in civilization..... | P15,000 |
| (b) For special scholarship, to include cases of selected individuals whose professional training or inclination may, in the opinion of the secretary of the interior, specially tend to render permanent the complete fusion of the Christian and non-Christian elements populating the Provinces of the archipelago, etc..... | 10,000 |

Complete discussion of the work accomplished by the department under the above-mentioned items is contained in the chapter dealing with our non-Christian territory and inhabitants.

Act No. 2736, the public works act for 1918. Several items under this act were placed under the discretion of the secretary of the interior for distribution:

Non-Christian and special Provinces.

- | | |
|--|---------|
| (a) For the construction, improvement, and extension of telephone lines..... | P50,000 |
| (b) For aid to local governments in the construction of a simple type of sanitary public markets..... | 30,000 |
| (c) For the construction and improvement of public buildings and for other purposes..... | 30,000 |
| (d) For the construction, improvement, and maintenance of irrigation systems in the Mountain Province..... | 8,000 |

The above-mentioned funds were undoubtedly intended for expenditure in non-Christian Provinces, the caption "Non-Christian and special Provinces" to the contrary notwithstanding. Accordingly proper distribution thereof was made, taking into consideration the furtherance of the works for social, economic, and political advancement of the non-Christian territory and inhabitants.

Act No. 2745, amending Act. No. 2510, known as the public welfare board act, and placing said board under the executive supervision of the department of the interior. Appropriate mention of the work of this board is elsewhere made in this report.

Act No. 2753, an act authorizing provincial boards to establish and manage irrigation systems and providing funds for this purpose. The intervention of the department of the interior in this matter is confined to approving the appropriation by a provincial board for irrigation purposes of such sum not exceeding 25 per cent of its road and bridge fund. So far no provincial board has as yet taken action under this act.

Act No. 2755, an act to authorize the establishment of municipal irrigation systems, and for other purposes. Several municipalities have attempted to take advantage of this act, but no one as yet have ever been granted the benefits thereof.

Act No. 2756, an act to provide for the relief of the invalids of the Philippine revolution or wars, appropriating funds for this purpose, and for other

purposes. On February 8, 1917, the Philippine Legislature adopted Concurrent Resolution No. 8, creating a committee of six members to ascertain the number of surviving invalids of the late revolutions, their whereabouts and their means of subsistence, in order to extend relief to those in need of it. This action was prompted by the report "that there are a considerable number of invalids of the past revolutions who, having fought with loyalty, valor and unselfishness for the cause of their country and not having derived any personal profit whatsoever from said revolutions, are now living in utter destitution after having done everything possible to continue living peacefully and honorably." Acting in accordance with the report and recommendation of the committee the Philippine Legislature enacted Act No. 2756. Thereunder the secretary of the interior is charged with the duty "to decide whether or not a person is an invalid within the meaning of this act, taking into consideration the record of such person prepared by the joint committee of the legislature above referred to, and of the investigations made by the same and its several subcommittees, for which purpose, as soon as this act takes effect, the personal records of all applicants for registration in the records of invalids shall be transferred to the office of the secretary of the interior." The number of applicants registered is 363, and out of this number only 83 were declared in 1918 as invalids of the Philippine revolution. As may be noted very few were able to register as invalids, and as registration is required before a person can be declared an invalid, there seems to be a necessity for an amendment to the law in order to enable to register those who either through ignorance or failure to be duly notified were unable to do so. It is certainly hard to believe that throughout the length and breadth of the archipelago there could only be 363 supposed invalids of the past wars. In fact this office has received several applications for registration and numerous inquiries as to the possibility of registration, all of which had to be disregarded on account of the provisions of law.

Act No. 2760, an act to confirm and ratify all steps taken for the erection, maintenance, and improvement of national monuments, and particularly for the erection of a monument to the memory of Andres Bonifacio, to authorize the creation of a committee or committees for taking up popular subscriptions, and to appropriate funds therefor. Under this act "the secretary of the interior is authorized to appoint a committee or committees for the purpose of taking up popular subscriptions in such manner and subject to such conditions as said secretary of the interior may prescribe." Acting in pursuance of that authority the secretary of the interior appointed a committee in each regularly organized Province, in each specially organized Province, in the Department of Mindanao and Sulu and in each Province thereunder, and in the city of Manila. A quota of ₱25,000 was fixed for the Provinces, and the return shows an over-collection of ₱837.87.

Act No. 2762, an act providing that the board of pharmaceutical examiners shall at the same time be a pharmacy inspection board, increasing its duties, powers, and attributes, and appropriating funds for this purpose.

A summary of the work done by this board is made in another place in this report.

Act No. 2773, authorizing the municipalities of Santa Cruz and Majayjay, Laguna, and the municipality of Santa Lucia, Ilocos Sur, to issue bonds for sewers and waterworks.

Act No. 2774, amending the Manila charter as contained in the Administrative Code of 1917.

E. GENERAL STATEMENT OF CONDITIONS.

The year 1918 has been noteworthy by reason of:

1. Most satisfactory conditions of peace and public order, assuring a permanent stable government throughout the archipelago.

2. Marked advances of our Provinces and municipalities along social, political, and economic lines.

3. Noteworthy progress of our non-Christian territory and inhabitants, especially in the sense of rendering permanent their complete assimilation and fusion with the rest of the archipelago.

In summary, the state of affairs throughout the islands is most encouraging from the standpoint of the administrative undertaking of the department of the interior.

F. GENERAL OPERATION AND ACTIVITIES.

Under this heading it is proposed to discuss in general terms only the most salient features of the activities of the department.

Exercising as it does administrative supervision and control over the government of the Provinces, chartered cities, municipalities, townships, and other local political divisions, the department of the interior must necessarily assume the heavier burden of responsibility for the peace, happiness, and prosperity of the people of the islands. The preservation of peace and public order in the midst of material progress and social activities is the acid test of the ability of a people to establish a stable government of its own. Knowing this, the department of the interior is sparing no efforts to the end that the blessings of peace may forever illumine the way for greatness and prosperity. Through the constabulary and the provincial and municipal officials, the department of the interior preaches the gospel of peace and order to the people of the islands. It investigates or causes to be investigated local disturbances, traces or causes to be traced their sources or origins, and applies or causes to be applied proper remedies to prevent their recurrence. Happily the year 1918 has been a year of peace and continuing good order.

But in order that a permanent and lasting condition of peace and public order may be assured the doctrine of mutual confidence and cooperation between local officials and the people must also be preached and practiced. Thus the department of the interior, through its local officials and agents, or by frequent inspections, is making the people understand that the Government is practically of their own creation and the officials are generally of their own choosing, whom they elevate to the high posts to serve the best interest of the community. On the other hand, local officials, be they elected or appointed, are always being instructed to place public welfare over and above their personal convenience and interest, and whenever and wherever they conduct themselves adversely to this instruction they are administratively censured and punished.

To see that the policy and program of administration of the department of the interior in regard to our Provinces and municipalities is being adhered to and followed, the undersigned never fails to make annual trips of inspection. During the year 1918 the Secretary of the Interior has inspected the various Provinces, especially of Luzon. It was during those trips that he noted the great strides made by our Provinces and municipalities. An harmonious relation exists among the diverse elements populating the archipelago. Compact and united, the Filipinos are working with common purpose and for common advancement.

But it is not alone in connection with the preservation of peace and public order nor in regard to the progress of our Provinces and municipalities that the activities of the department of the interior are confined. For the purpose of his supervisory authority he promulgates or authorizes to be promulgated by department orders or by means of circulars, such rules, regulations, orders, or instructions necessary for the government of the department or for an harmonious and efficient administration of the bureaus and offices of Provinces, cities, and municipalities. During the year 1918 the department has issued 12 department orders, the most important of which are Department Order No. 13, establishing a school of nursing in the southern island hospital division, and Department Orders Nos. 19 to 22, inclusive, regarding the raising of funds for the erection of a monument to Andres Bonifacio. Then there are several important circulars issued by the department, among which are the one directing chiefs of bureaus and offices to use utmost care in the expenditure of money voted for their respective bureaus and offices to avoid the disagreeable task of applying to the emergency board or to the Philippine Legislature for an additional sum to cover any deficiencies or shortages; the one directing chiefs of bureaus and offices to furnish the department with copy of all actions taken, or decisions rendered, or correspondence had, on all important matters which may not need the approval of, or which need not be coured through the department, and the one prescribing a procedure for the preparation of annual reports by provincial governors. Then also at the instance of the department of the interior numerous circulars have been issued by the executive bureau and the bureau of non-Christian tribes, the most important of which are the ones referring to interisland emigration of laborers for the proper distribution of labor; the ones authorizing the provinces to subscribe to the third and the fourth Liberty loans; the one intended to secure information as to the number of orphans and dependent chil-

dren in the Provinces; and the one prescribing the proper procedure for applying for licenses for firearms.

Finally, there are other matters which under the Administrative Code are required to be acted upon by the department of the interior. The most important ones are the following:

1. *Aid to insular and provincial charitable institutions and exhibition purposes.*—Under sections 2248 and 2293 of the Administrative Code, municipal councils, with the approval of the secretary of the interior, may make appropriations for aid to insular or provincial charitable institutions and exhibition purposes. Municipal appropriations made under the provisions of these two sections amounting to ₱6,085 have been approved by this office during the year 1918.

2. *Boundary disputes.*—Under section 2167 of the Administrative Code, boundary disputes between municipalities may be appealed to the department of the interior. During the year 1918 six boundary disputes have been acted upon by this office.

3. *Provincial loans to municipalities for public purposes.*—Under section 2106 (c) of the Administrative Code, provincial boards, upon approval of the department head, are authorized to appropriate money for loans to municipalities, townships, or settlements of the Province, under such conditions as to the use of the funds loaned and as to the repayment of the loans with interest, at 3 per cent per annum, as may be fixed by the provincial board. Pursuant to this section, provincial loans to municipalities amounting to ₱94,850 have been approved during 1918.

4. *Authority to exceed percentage limit for salaries and wages of municipal officials.*—Under the provisions of section 2299 of the Administrative Code of 1917, the provincial board, with the approval of the secretary of the interior, may authorize any municipality of the Province to exceed the percentage limitation upon amount expendable for salaries and wages. During the year 1918 two requests have been acted upon by this office.

5. *Payment of salaries to municipal officials during suspension.*—Under the provisions of section 2192 of the Administrative Code of 1917, a municipal official suspended from office pending investigation of the charges against him may, upon subsequent exoneration and reinstatement, be paid his salary during the period of his suspension, with the approval of the secretary of the interior. During the year 1918, 11 petitions have been received—5 denied and 2 granted, while the rest are still pending consideration.

6. *Condemnation proceedings and closing or opening of streets, thoroughfares, plazas, or squares.*—Under sections 2245 and 2246 of the Administrative Code of 1917, a municipal council may exercise the right of eminent domain and close any municipal road, street, alley, park, or square, subject to the approval of the department head. During the year 1918, 60 requests have been acted upon by this office.

G. LAW AND ORDER.

Five years ago the United States inaugurated a new policy in the administration of the affairs of the Philippine Islands. Radically differing from the one theretofore pursued in that it practically placed in the hands of Filipinos the rein of interior government in the islands, the new policy was augured by a prejudiced and misinformed few as the dramatic beginning of internecine troubles. The history of the last five years answers the prediction with scorn. During that period a state of peace has existed throughout the islands, and now it may be said without fear of contradiction that the disastrous results predicted by some are things of the past.

Hardly nine months had elapsed since the announcement of the new policy was made, when the world was shocked by the news of war. The mighty forces of autocratic Germany defied all laws of righteousness and humanity and one after another the nations of the world were drawn into the struggle. The severe pinch of war began to be felt throughout the Philippines. The prices of articles of prime necessity began to soar so high that last year they were almost beyond the reach of our common people. But, true to their traditional peacefulness, they have borne the abnormal conditions with patience and resignation, merely petitioning the Government to intervene in the regulation of prices in order to protect the masses from starvation. Typical of the peacefulness of our people is the public manifestation made by more than 20,000 laborers, men, women, and children, who in the month of August last paraded through the streets of Manila and then gathered before the Ayunta-

miento to hand a petition to the government asking that necessary action be taken with a view to reducing the prices of foodstuffs and other necessities of life. Such a manifestation carried on in the most peaceful and orderly manner had no parallel in any other war-afflicted country.

Owing to economic difficulties consequent upon the World War, some one would naturally suppose that lawlessness and criminality would be a common occurrence. But, no. Our peaceful and law-abiding inhabitants have behaved in the most exemplary manner. They have given no concern or embarrassment to the government even in those moments of extreme national crisis. Undoubtedly this is due in the main to the change in policy which resulted in the intelligent understanding between the people and the government. Of course occasional and insignificant breaches of the peace have happened. The Negrito unrest in the Province of Zambales may be cited as an instance. But such incidents are merely of local significance and the agencies of the Government have always been prompt and successful in apprehending the criminals and delivering them before the bar of justice.

The foregoing is a frank statement of general peace and public order conditions throughout the archipelago. It is an evidence, final and conclusive, of the existence of a stable government in the islands, a stability tested not only by the extension of government influence and control to the remotest districts inhabited by non-Christian Filipinos, where perfect order now reigns, but also by the uninterrupted maintenance of law and order during the World War.

H. OUR ORGANIZED PROVINCES AND MUNICIPALITIES.

Formerly organized Provinces and municipalities were governed by Acts Nos. 82 and 83 of the Philippine Commission, and numerous other acts amendatory thereof. All these acts were harmonized, consolidated, and embodied in an administrative code, which, as recently revised, is known as the Administrative Code of 1917. Another step to make provincial and municipal legislation more systematic and uniform has recently been taken. Formerly, in addition to the provincial and municipal laws applicable to the regular Provinces and municipalities, there were provincial and municipal laws applicable to the Provinces and minor political subdivisions in the Department of Mindanao and Sulu and laws applicable to the other special Provinces and political subdivisions therein. These latter laws are obsolete and no longer warranted by the progress made in those special Provinces since their enactment. For this reason, and for the sake of uniformity as above stated, these laws have been repealed recently and substituted, with slight modification, by those in force in the Department of Mindanao and Sulu which have proved to be highly progressive, and have contributed largely to the rapid political, social, and economic advancement in that region.

A survey of the laws affecting Provinces and municipalities will reveal the significant fact that the trend of legislation is toward uniformity and toward the extension of popular control over local governments, the gradual and steady assumption by the Filipinos of the entire provincial and municipal administration.

The supervision and control over organized Provinces and municipalities were formerly exercised by the Governor General through the executive secretary. Now, this power is intrusted to the secretary of the Interior, through the chief of the executive bureau, both of whom are Filipinos. It is therefore deemed proper to describe even briefly the conditions of our Provinces and municipalities, especially during the period covered by this report, in order to show the great advances made by them under the administration of Filipino officials.

It should be stated at the outset that the provincial and municipal governments, to an increasing degree, are being encouraged to a more ample exercise of self-government and accustomed to less active supervision by the Central Government, the latter intervening only when the law so requires, or whenever the officials abuse their powers or grossly neglect their duties to the detriment of the public interests. Unnecessary intervention in provincial and municipal affairs has been discontinued and the autonomy of the Provinces and municipalities respected in so far as consistent with the safety of the Government and the general welfare. As a consequence, provincial and municipal officials now, more than ever before, appear to understand the responsibilities they have assumed. Whereas, before they had to be guided in every turn or step, now their administration is characterized by initiative and efficient action.

So, the greater autonomy granted has greatly reduced the number of offending officials. This shows a constant improvement in our provincial and municipal administration, a better realization on the part of our municipal officials of the responsibilities contracted by them with their constituents—the people whose sovereign will has exalted them to position and power.

Nor has progress been along political lines alone. Our Provinces and municipalities have also improved socially and economically. The year 1918 has seen a good increase in the number of our Provinces and municipalities. Although, as a general rule, the organization of new Provinces and municipalities is favored, yet it has been the constant policy not to recommend such organization unless the social and economic conditions of the places concerned fully warrant such action. The creation of so many Provinces and municipalities, therefore, is indicative of the progress being made along social and economic lines in our Provinces and municipalities.

The chief sources of revenue of the Provinces are the cedula tax, the percentage of internal-revenue taxes accruing to them, and the real-property tax; of the municipalities the cedula tax, internal-revenue licenses and percentage, real-property tax, municipal licenses, fisheries, cattle registration, and rents, profits, and privileges.

Their financial resources have, as a rule, permitted them to undertake necessary public works, such as the construction and repair of schoolhouses, municipal government buildings, roads, bridges, etc. They have encouraged and contributed to the establishment of public schools, the organization of a system of sanitation and the execution of public works, such as roads, bridges, provincial and municipal buildings, markets, and slaughterhouses, artesian wells, wharves, docks and piers, parks, and monuments. And in cases where their financial resources have not been sufficient to permit them to carry out public improvements the Provinces and municipalities readily contract loans, which they always endeavor to pay at the earliest possible date. In countless instances the people have shown commendable spirit by voluntarily contributing money, material, and labor for public purposes.

The foregoing brief statements show what progress has been made by our Provinces and municipalities under the administration of Filipino officials. They have accomplished wonders which any nation can be proud of. The inhabitants have seen schools multiply in remote barrios, and knowledge of hygiene and sanitation penetrate into the remotest communities. They have seen fine roads thread their way through every Province, transforming poverty-stricken regions into rich and flourishing communities. All these have brought to the Filipino people a sense of unity and have turned out a well-educated citizenry worthy of their race. The Filipino people have witnessed the transfer of government into their hands and have handled it in a manner creditable to themselves and their country.

I. OUR NON-CHRISTIAN TERRITORY AND INHABITANTS.

Our non-Christian territory is organized in the nine Provinces of Agusan, Bukidnon, Cotabato, Davao, Lanao, Sulu, and Zamboanga in the Department of Mindanao and Sulu, and the Mountain Province and Nueva Vizcaya on the island of Luzon. The inhabitants of this territory are not, however, wholly non-Christian, for a great portion of them is composed of civilized Christian elements. In Nueva Vizcaya, for instance, the civilized Christian inhabitants predominate. Our non-Christian territory is under the jurisdiction of the bureau of non-Christian tribes.

Our non-Christian inhabitants are not, however, confined to the territory above mentioned. Our special Provinces and several of the regularly organized ones also contain non-Christian elements, although limited in number.

The policy of the Government toward the non-Christian people has always been "to establish and promote friendly relations with the non-Christian people of the Philippine Islands and to promote their agricultural, industrial, and economic development and their advancement in civilization." Or, as clearly and unequivocally expressed by the Philippine Legislature in Act No. 2674, "to foster by all adequate means and in a systematic, rapid, and complete manner the moral, material, economic, social, and political development of the regions inhabited by non-Christian Filipinos, always having in view the action of rendering permanent the mutual intelligence between and complete fusion of all the Christian and non-Christian elements populating the Provinces of the archipelago."

The purpose of the organization of the bureau of non-Christian tribes is evidently to promote the rapid advance of non-Christian territory that the same may be organized as regular or special Provinces under the jurisdiction of the executive bureau. Accordingly laws have been enacted providing for the promotion of friendly relations and union between the Christian and non-Christian inhabitants of the Philippine Islands and the extension to the Department of Mindanao and Sulu and other special Provinces of laws of general application in the regularly organized Provinces.

The secretary of the interior, who is the official charged with the supervision over all the non-Christian people, has always followed the policy outlined above. His program of administration with regard to the non-Christian people has always in view the advancement of the non-Christian elements of our population to equality and unification with the highly civilized Christian inhabitants.

For the regular Provinces under the executive bureau, where non-Christians constitute a distinct element from the rest of the inhabitants, the secretary of the interior has appointed special agents to take charge of the work among those people. Uniform instructions have been issued to those agents to guide them in their work. Such instructions read as follows:

"Pursuant to the provisions of law, you are hereby appointed superintendent ——— under the department of the interior with compensation at the rate of ——— per annum, the appointment to take effect ———.

"In this connection, attention is invited to the provisions of section 279-b of the Administrative Code which provide that temporary and emergency employees are not entitled to leave of absence.

"By virtue hereof, you are hereby vested with the powers and duties of an agent of the secretary of the interior in the exercise of the authority conferred upon him by law over the ——— in question. It will be primarily your duty to dedicate all your time to the work of leading this people to economic, social, and political development. You should adopt means whereby those of them who are still given to nomadic life may be persuaded to abandon their wild habitat and settle in organized settlement. You should make them understand that it is the purpose of the Government to organize them politically into fixed and permanent communities, thus bringing them under the control of the Government; to aid them to live and work, protect them from involuntary servitude and abuse, educate their children, and show them the advantages of leading a civilized life in par with their civilized brothers. You should select suitable places where the several families may be gathered and concentrated with a view to organizing them politically. The organization to be established among them must be of the simplest and in keeping with their means, customs, and prejudices. You should promulgate such rules of government as may be considered adaptable to their ideas, customs, and needs.

"The organization of this people should be aimed at and accomplished, taking into consideration the likings and inclination of the people to be organized. They may prefer to continue their ways and mode of living by families scattered in the several places, instead of grouping together in a fixed and permanent settlement, in which case they should not be disturbed, but your attention should be concentrated to improving their living conditions in order that they may better appreciate the benefits and advantages of civilization. While allowing them, however, to settle by families they should be subjected to an efficient and united direction which will impress upon them the existence of ties superior to those of the family community in which they are living, and which will make them respect the authorities that may be constituted among them.

"Moreover, you should see that they are properly engaged in legitimate pursuits of some business or undertaking, especially in agriculture and farming. You should advise them that an exchange will be established among them, which will purchase from them whatever products they may offer for sale at reasonable prices, and will furnish them with such articles as they may require for their needs.

"Finally, you should cooperate with the school-teachers assigned to this people in the work of urging the children of school age to enroll in the schools, the education of those children being considered as the best medium by which this people can be brought to equality and unification with their more advanced neighbors.

"In the exercise of the foregoing powers, you should take into account the necessity of securing the decided and efficacious cooperation of the provincial authorities and peace officers of the Province. The tact, patience, discretion,

and skill required in the performance of your duties are such that they can only be satisfactorily discharged if you fully realize the importance of your mission and the service you are to render to your country. I hope you will enter with your whole heart and soul upon this work which, if successful, will not only afford you great satisfaction, because of the service rendered to your backward countrymen, but also will entitle you to the esteem and applause of the Government and of your people."

The expenses for carrying on the work of those special agents are voted by the Philippine Legislature as "discretionary expenses of the secretary of the interior for such purposes as he may consider necessary for establishing and promoting friendly relations with the non-Christian inhabitants of the Philippine Islands and for furthering their agricultural, industrial, economic, and social development and their progress in civilization." Moreover, there are non-Christian funds "maintained in the provincial treasuries of such of the regularly organized Provinces as contained non-Christian inhabitants which shall be available exclusively for expenditures for the benefit of the non-Christian inhabitants of the Province upon approval of the secretary of the interior." (See sec. 2114, Administrative Code.)

In the special Provinces the same course of action as regards the appointment of special agents is deemed advisable, although during the year 1918 no such agent has ever been appointed. This does not mean, however, that no action looking to the advancement of the non-Christian inhabitants in those Provinces has ever been taken. In fact, in the Province of Palawan the Lieutenant Governor has always been engaged in the work among the non-Christian people, while in the Province of Mindoro the Mangyan agent has been engaged in the work for the advancement of the Mangyan people.

Moreover, the special Provinces have been included in the non-Christian Provinces in the matter of special scholarships.

Then there are special provisions in the Administrative Code of 1917 which are intended to aid the non-Christian people in those special Provinces to acquire the knowledge and experience for successful local popular government and to maintain law and order and individual freedom among them. Said provisions read as follows:

"SEC. 2145. ESTABLISHMENT OF NON-CHRISTIANS UPON SITES SELECTED BY PROVINCIAL GOVERNOR.—With the prior approval of the department head, the provincial governor of any Province in which non-Christian inhabitants are found is authorized, when such a course is deemed necessary in the interest of law and order, to direct such inhabitants to take up their habitation on sites on unoccupied public lands to be selected by him and approved by the provincial board."

"SEC. 2759. REFUSAL OF A NON-CHRISTIAN TO TAKE UP APPOINTED HABITATION.—Any non-Christian who shall refuse to comply with the direction lawfully given by a provincial governor, pursuant to section 2145 of this code, to take up habitation upon a site designated by said governor, shall upon conviction be imprisoned for a period not exceeding sixty days."

The above-quoted provisions of law have been in existence in our statute book for a long time, but it was only in 1918 when their validity was first challenged. Thereunder the provincial governor of Mindoro and the provincial board thereof directed the Mangyans to take up their habitation in Tigbao, a site on the shore of Lake Naujan selected by the provincial governor and approved by the provincial board. An application for habeas corpus in their favor was presented before the supreme court, and this high tribunal denied the application.

So much for the non-Christian elements in our regular and special Provinces. We now come to those in the non-Christian territory proper where the program of administration and its specific ends may be summarized as the extension and maintenance of Government control and public services to assure public order and as rapid economic development as possible for the adult inhabitants, and the compulsory attendance at public schools of all children of school age wherever public-school facilities have been provided.

There are thus undertaken to be established on a firm basis (1) acceptance of and obedience to constituted government by all elements of population even in the most remote regions, (2) the material improvement of the economic condition of the people through the extension to them of all the various branches of public service beginning with police protection to assure security of life and property and including even the facilities of the provincial trading stations where, with the certainty of fair dealing, the people may find

good markets for their products and available stocks of the staple articles of merchandise which they require but do not or can not produce, and (3) sufficient progress in the understanding and practice of citizenship and economic efficiency through training of children and youth to assure future stability of government upon the younger generation coming into control of local affairs.

The policy and definite program of government as to political development include the present adult as well as the younger generation. This program not only undertakes to assure to Mohammedans and pagans representation in the provincial governments but also practical training in local government through the appointment of the best available representative men as presidents, vice presidents, and councilors in the municipal district organizations which are embryo municipalities. Special importance has been given, as matter of policy to the placing of local government to the maximum practicable degree in the hands of popular local leaders. To this must be attributed in great part the generally favorable response of Mohammedans and pagans to the requirement of submission to constituted government and the undoubted considerable inclination of popular opinion favorable to political and social unification with the Christian population.

Moreover, selected individuals from those regions and also from the special Provinces under the executive bureau, whose professional training or inclination or whose influence over his or her people, may be of great value in rendering permanent the complete fusion of the Christian and non-Christian elements, have been appointed to special scholarships. Such selected individuals, upon completing the course which they are required to pursue will be sent back to their people to preach the gospel of harmony and union. During the year 1918, 10 such special scholars have been appointed.

The efficiency and success of the work among the non-Christian people is well shown by the fact that they are now living in peace and contentment, and are engaged in agriculture and industry. They are sending their children to school and are beginning to appreciate the advantages of leading a civilized life. Verily, civilization and progress have dawned on these people in a permanent and lasting form as evidenced by the great strides with which they are adapting themselves to the onward march of times and their tendency toward self-betterment. There is therefore no cause for worry or despair. The progress of those people is most encouraging and the signs of the time point to a day not far distant when they will become as useful citizens as their brothers, the Christian Filipinos.

J. EXECUTIVE BUREAU.

The activities of the executive bureau have always been confined within the policy or program of administration announced by the department head of extending to Provinces and municipalities as much autonomy as the law permits, intervening only whenever the law requires or whenever the officials abuse their powers or neglect their duties to the serious detriment of the public interest and welfare. Among the works performed by the executive bureau during the year covered by this report may be mentioned the following:

(a) *Real-property assessments.*—The revision of real-property assessments in the Provinces of Batangas, Pampanga, and Tarlac was completed during the year 1918, and there are now 21 Provinces whose revision under the assessment law has been completed.

The revision work in 664 municipalities and 3 townships has been finished—75 municipalities and 1 township in 1918 and 589 municipalities and 2 townships in previous years.

Before the general revision of assessments provided by Act No. 2238 was undertaken the number of taxable parcels was 1,947,486, assessed at ₱298,905,970. At the end of 1918 the number of taxable parcels and their assessed valuation were 3,245,276 and ₱6,110,778,230, respectively, thus showing an increase of 1,282,024 parcels and ₱308,836,680 in assessed valuation. The percentage of increase in valuation is 113. The three Provinces ranking high in the increase of percentages of parcels and of assessed valuation are Bohol, Surigao, and Leyte.

(b) *Provincial budgets and plantillas of personnel.*—Provincial budgets and plantillas of personnel for all the Provinces of the islands, except those of the Department of Mindanao and Sulu, are acted upon by the executive bureau.

All plantillas for the year 1918, were approved by this bureau with the necessary amendments. (Sec. 2081 of the Administrative Code.)

(c) *Voluntary contributions.*—The executive bureau originally acts on requests for authority to collect and receive voluntary contributions. One hundred and fifty-six of such requests were received and recommended to the Governor General and finally granted by him.

(d) *Inspection by provincial agents.*—During the year, 21 Provinces have been visited by provincial agents.

Conditions in these Provinces as found by provincial agents were, in general, satisfactory. Some deficiencies like the laxity on the part of a few provincial and municipal officials in the performance of their duties, insanitary conditions of some public markets, inadequate provisions for municipal police force and municipal prisons, and improper operation of one provincial steamer have been noted. These deficiencies have been, or otherwise are now being, remedied.

(e) *Payment of bonuses to provincial and municipal officials and employees.*—Following the plan of granting bonuses to insular officials and employees in view of the existing abnormal conditions, the bonus system was extended to Provinces, thereby according to provincial and municipal officials and employees the same consideration given insular officials and employees in this regard.

It was not possible to authorize the payment of bonuses to provincial and municipal officials whose salaries are fixed by law during the year 1918, as there was no law which would make this action legal. To this effect recommendation was duly made to the department of the interior for special legislation, and Act No. 2785 (appropriation for 1919) now authorizes said payment effective January 1, 1919. Provinces were advised accordingly.

(f) *Organization of new municipalities.*—The executive bureau primarily acts on matters relating to the organization or creation of new municipalities. The finances or resources, the location, and other matters relative to the ability or advisability of a given political division or divisions being organized as an independent municipality are investigated by the executive bureau. Upon the recommendation of this bureau, 18 new municipalities were organized during the year by executive orders of the Governor General, effective January 1, 1919.

The organization of 19 barrios or settlements and the transfer of the seats of government of 3 townships were recommended to the Governor General during the year covered by this report and finally approved by him.

(g) *Administrative investigation.*—During the year 1918 there were received in the executive bureau 67 cases against municipal officials, of whom 48 were found guilty and 18 found not guilty. Only 1 case was pending final action at the end of the year. Of those found guilty, 12 were removed from office and 36 were suspended, reinstated with reprimand or warning, or otherwise disciplined. Of the officials disciplined, the municipal presidents numbered 17; vice presidents, 4; councilors, 28; and secretary, 1. Of the officials exonerated, 6 were municipal presidents, 2 vice presidents, while 10 were councilors. The only case pending final action at the end of the year was against the municipal president of Dumaguete, Oriental Negros.

(h) *Appeals by municipal council.*—Under the provisions of section 2235 of the Administrative Code of 1917, a municipal council, in case of disapproval of their ordinances or resolutions, appeal by a two-thirds vote to the chief of the executive bureau. Twenty-two such appeals by municipal councils were received and disposed of by this office in 1918; 15 dismissed and 7 sustained.

(i) *Appointment of officials of new municipalities.*—Recommendations for appointment of officials of new municipalities are also made by the executive bureau and forwarded to the secretary of the interior. During the year the officials for the new municipalities were appointed by His Excellency the Governor General, upon the recommendation of this office and the secretary of the interior.

(j) *Circulars.*—For the purpose of more effective supervision which this office exercises over Provinces and municipalities, the executive bureau has issued circulars during the year, 6 numbered circulars and 20 unnumbered ones.

(k) *Cooperation with other government bureaus or offices.*—The executive bureau has continued to cooperate with the other bureaus and offices in the effective performance of the functions assigned to them by law. Thus this bureau continues to cooperate with the bureau of agriculture in the campaign for the eradication of locusts and rinderpest by urging provincial and municipal officials to exert their utmost effort to eradicate the pests and reprimanding them when found negligent or lax in the performance of their duties; with the

bureau of health in the prevention or eradication of epidemic diseases, such as cholera and smallpox, as evidenced by the various circulars already issued by this office; with the bureau of coast and geodetic survey in securing for the local authorities geographical data; and with the bureau of non-Christian tribes in carrying out the policy of the Government to bring the territory under that bureau under the same form of government as that existing in the other parts of the islands. In general, cooperation has been lent to all other bureaus and offices in movements beneficial to Provinces and municipalities.

(1) *Other provincial matters.*—The following matters have also received the attention of this bureau: 1,350 provincial and municipal requisitions for printing during the year 1918; 13 resolutions adopted by provincial boards under section 2096 of the Administrative Code of 1917 requiring either elective members of the provincial board to perform the duties of any other provincial officer or to perform any ministerial duty required by the board, of which number 6 were disapproved and 7 were approved; 7,474 requisitions for supplies on the bureau of supply by the provincial and municipal governments, all of which were received and approved by this bureau.

Numerous requests were made by provincial officials for permission to leave the Provinces on official business and to visit Manila to take up official matters with the Central Government. Requests were made for increases in salaries of municipal officials in excess of those authorized by section 2184 of the Administrative Code of 1917, of which requests 14 were granted and 22 denied. Bills introduced in both houses of the Philippine Legislature affecting Provinces and municipalities are oftentimes referred to the executive bureau for comment and recommendation.

Petitions from provincial and municipal officials to engage in private business were made.

K. BUREAU OF NON-CHRISTIAN TRIBES.

The year covered by this report has been one of highly satisfactory progress generally throughout the territorial jurisdiction of this bureau not only in the extension and strengthening of Government control, but also in all activities of public service. This has been due not only to the increasing experience and consequent greater efficiency of administrative personnel, but also and especially to the better understanding and acceptance of constituted Government control and its acceptance by the people is found in the general increase in the number of taxpayers both as to the capitation (*cedula*) and the real-property taxes.

Conditions as to public order have been encouraging in the highest degree throughout the year due to the excellence of the constabulary work and the close cooperation by the personnel of all branches of Government operating within these Provinces. There is no organized band of outlaws nor in any district is there defiance or refusal to submit to Government. Security of individual life and property is greater than at any previous time in the history of these Provinces.

Compulsory school attendance, even in Mohammedan regions and affecting girls as well as boys, has been put into effect with remarkable success wherever the Government was prepared to provide the necessary teachers, buildings, etc.

Economic progress during the year has continued as to agriculture, commerce, and industries, with some depression during the latter part of the year because of disturbed conditions of the hemp market and the consequent reduction in the output of the plantations. The food situation has presented no serious problem.

In every respect conditions generally throughout the jurisdiction of this bureau during and at the close of the year have confirmed the policy of Government in these specially organized provinces.

L. BUREAU OF CONSTABULARY.

Administratively, the year 1918 has been a year of many perplexing problems. With war prices soaring high and officers going out by the score, the conditions in the bureau have been that of constant watching and supervision. The appropriation for supplies and equipment was not based on war prices. However, these had to be met. The subsistence of 21 cents per day for enlisted men was found entirely inadequate, and it taxed our officers to their utmost to make both ends meet.

Law and order throughout the islands are most satisfactory and no ladrone bands exist. The relations between Christians and non-Christians in northern Luzon continue most harmonious and trading between the mountain and lowland people has increased accordingly. No fear is entertained by either to enter the other's territory. No feuds of any importance exist between the different settlements of non-Christians, and it is noteworthy that no headtaking has been recorded during the year. With the surrender of the Negrito leader, Domingo Angcot, on February 27, 1918, the unrest among the people in the mountains of Zambales has ceased and they are living in peace and tranquillity.

On the whole, excellent progress has been made in the extension of Government influence throughout the non-Christian territory. In the Province of Lanao the collection of cedula tax shows a 25 per cent increase over that of 1917. In the Province of Bukidnon 12 families from Batanes Islands have settled at Mallag and engaged in agricultural pursuits, while the southeastern part of Cotabato Province has been the scene of a larger influx of Ilocanos, who have settled there and are peacefully cultivating their farms, living in perfect peace and harmony with their neighbors, the Tirurays. Schools have been established wherever the number of children have warranted them, and considerable increase in the attendance has been noted.

The political situation throughout the archipelago has undergone a complete change, and all parties are harmoniously working toward a common end—the political and economic advancement of the country.

The world conflict has advanced the process of foodstuffs enormously, but at the same time the country has never been as prosperous as during the past year.

On December 31 there were in all 6,325 municipal police, armed with 4,618 swords, 2,656 revolvers, and 605 other firearms. The efficiency of the police is as good as to be expected, considering the salaries paid.

M. PHILIPPINE GENERAL HOSPITAL.

The facilities of the Philippine General Hospital until about the middle of the year were available for about 420 beds, of which 95 were for pay patients and the rest were for the use of charity patients. Due to the increasing demand for hospital accommodation, especially during the influenza epidemic, the capacity of the hospital has been increased to 460 beds.

Although the privilege of Government employees and their families to free medical assistance at the hospital was abolished, the pay sections are always crowded. This proves that the Government employees still continue to come and that the well-to-do class of the population now realizes the benefits which can be derived from a modern hospital treatment.

The private pay patients have been given more privileges than before, among which is the privilege to be accompanied during the night, whether they are very sick or not, by a member of their families or by a friend who is of the same sex as the patient, and when they are seriously ill, to be accompanied by a person of whatever sex, provided a permission to this effect has been previously obtained from the director.

The Philippine National Guard has claimed the services of some of the hospital employees, especially the resident doctors. In some departments the work of the hospital was greatly affected by this shortage of residents and it was necessary to appoint new graduates and to qualify the senior medical students to take their places. The free out-patient maternity service of the department of obstetrics, which has been doing good work for the poor of the city, had to be discontinued on October 27 owing to the shortage of doctors.

The graduating class in the school of nursing consists of 122 senior nurses and 10 midwives. Upon their graduation they would leave a large number of vacant places which will have to be filled by new applicants, if the efficiency of the service has to be maintained. As one of the requirements for admission to the school of nursing in 1919 is that the applicant must have completed the second year of high-school course, in order to be able to admit as many applicants as are necessary to fill all the places to be left vacant, the school of nursing has requested the board of regents of the University of the Philippines to suspend the enforcement of the above requirement temporarily and to authorize the Philippine General Hospital to receive not only those applicants who have completed the second year high school but also those who have finished the first year.

The work in some of the departments has also been hindered to a certain extent by the increase in the cost of materials and supplies. However, the hospital work has been, on the whole, performed very satisfactorily.

The hospital is in need of a library. The nurses' library and the so-called staff library of the hospital do not meet the requirements of a real hospital library, as the former consists of a few bound volumes, some nonmedical magazines and journals, and Manila daily newspapers.

The hospital is spending about ₱42,000 for laundry annually. There is no doubt that, if the hospital laundry were handled by the hospital itself and not by a private concern, as it is at present, a large amount of money would be economized and that the use and handling of linen would be taken care of in a more satisfactory and economical manner.

Several repairs and alterations of the buildings and grounds of the hospital have been made, but there are still others to be accomplished. The present buildings have been constructed in many respects on a temporary basis, and many things in connection with their construction and the arrangement of the grounds, which can not be put on a permanent basis until the hospital, as it was originally planned, is completed, have to be adjusted continuously to the demands of a developing institution.

The Southern Islands Hospital was transferred to and became a branch of the Philippine General Hospital on January 1, 1918, by virtue of Act No. 2725 of the Philippine Legislature. The same act also provided for the establishment of a school of nursing of the hospital, which was inaugurated on April 15 with an enrollment of 25 pupil nurses. A house near the hospital was rented to be used as the pupil nurses' dormitory. The assistant chief nurse of the School of Nursing of the Philippine General Hospital was appointed chief nurse and principal of the Southern Islands Hospital School of Nursing, and she, together with some members of the nursing staff of the hospital and some private doctors in Cebu, constitute the faculty of the school.

The Southern Islands Hospital can accommodate at present 60 patients. The number of patients admitted during the year shows an increase of 231 over 1917.

N. GOVERNMENT ORPHANAGE.

The general care given to the children starts from the time of the admission, when a medical (physical) examination is made. As a general rule, children admitted to the orphanage come from the very poor classes of people, and their health, clothing, and general appearance speak of their past.

After a child is admitted, those above 5 years of age are supplied with clothing for their daily use as well as those to be used for holidays and other equipments, like towels, toothbrushes, mat and pillows, and a wooden box or trunk in which to keep his or her new belongings. After a while he or she would receive assignment of work in connection with the general plan or rotation system carried on by the institution to furnish the service desired to be accomplished. At the school he or she was placed in the grade where he or she belonged.

In the dormitories the children are taught and required to take their daily bath, clean their teeth, keep their clothes in order and change them accordingly, and see that they have a good sleep.

Children are weighed monthly to find out whether they receive sufficient nourishment. Height is taken and recorded quarterly.

A visiting dentist has been engaged by the institution in order to come at regular intervals, in order to inspect, make extraction and other treatment to the children's teeth.

Common illness in childhood, and the treatment of the same is done at the orphanage, which has a physician and a nurse among the employees, and where a small medicine room is kept well supplied with medicine and drugs needed and where emergency and other minor operations are performed. There is also, in addition, a laboratory where the examination of blood, urine, and feces is made. Sick children requiring hospital attention are sent to the Philippine General Hospital. There is an isolation room in a separate building where children with measles, mumps, pink eye, and other mild infectious diseases are taken care of and isolated, although whenever advisable children with infectious diseases are sent to San Lazaro Hospital.

Preventive work is employed and, thanks to the efforts made and to the systematic vaccination, the smallpox epidemic did not invade the institution.

The Spanish influenza epidemic, which appeared all over the world (pandemic) in 1918, had caused the confinement in bed, due to the infection of the disease, of

78 inmates of the orphanage, and while all the hospitals in Manila were filled and unable to receive cases of this disease, the situation was confronted successfully at the orphanage, where only one death from complication occurred, which had taken place at the Philippine General Hospital. Complications appeared in 22 cases among those taken care of in the orphanage, but none died.

A special class has been opened during the year (1918) to give an opportunity to the big boys and girls to make up the grade that their ability and age would permit.

The children are also taught industrial and trade work.

O. BOARD OF PHARMACEUTICAL EXAMINERS AND INSPECTORS.

Upon the organization of the board, steps have been taken to draft the rules on examinations for candidates to pharmaceutical profession and by-laws of the board as board of examiners and inspectors.

On July, 1918, the board held its first examination. The number of candidates was 52, 24 of whom have been approved, 8 conditioned, and 20 failed.

This board has collected the sum of ₱2,120 for examination fees and for apprentice certificates.

P. BOARD OF MEDICAL EXAMINERS.

The members of the board in the year 1918 were Dr. Isidoro de Santos, chairman; Dr. Fortunato Pineda, secretary-treasurer; and Dr. Ildefonso Villarreal, member.

The board held its regular quarterly written examination, resulting in the registration of 73 physicians and 34 midwives.

The amount of money collected by the board as fees was ₱4,656, while the expenses amounted to only ₱1,958.54.

Q. BOARD OF DENTAL EXAMINERS.

During the year 1918 the membership of the board consisted of Dr. A. P. Preston, chairman; Dr. Miguel de la Concepción, secretary-treasurer; and Dr. G. R. Mateo, member.

The board held its regular examination in June and December, resulting in the registration of 16 doctors of dental surgery.

The amount of money collected by the board in 1918 was ₱1,802, while the expenses amount to only ₱441.74.

R. BOARD OF OPTICAL EXAMINERS.

At the end of the year 1918 the board of optical examiners consisted of Dr. G. T. Herrmann, chairman; Dr. Cipriano Lara, secretary-treasurer; and Dr. Ramon J. Ongslaco, member.

The board held three examinations during the year, resulting in the registration of 28 optometrists.

The amount of money collected by the board as fees was ₱1,830, while the expenses amount to only ₱886.49.

S. PUBLIC WELFARE BOARD.

There were seven private organizations benefited by the Government fund during the year. These organizations are the following:

1. Philippine Islands Antituberculosis Society.
2. Gota de Leche.
3. Philippine National League for the Protection of Early Infancy.
4. Woman's Club of Manila (day nurseries).
5. Asociación de Damas Filipinas.
6. Philippine Orphanage Association.
7. Lucena Hospital.

Each of these private organizations has made efforts to obtain funds of its own by membership, benefit performances, soliciting donations, etc., and one of them has depended entirely upon the Government contribution.

T. CITY OF MANILA.

The policy of the present administration in Filipinizing the Government service has been followed in the city government, whenever competent Filipinos are found qualified to hold important positions in the city.

City officers and employees, including the temporary teachers, were granted a bonus at the rate of 25 per cent for those whose annual compensation is less than ₱2,400; 15 per cent for those whose annual compensation is ₱2,400 but less than ₱4,000, and 10 per cent for those whose annual compensation is ₱4,000 or more.

In the matter of carrying out public works improvements it has been, and it is still, the policy of the undersigned to have all the work done by administration whenever feasible. This procedure has been followed with a view to giving the engineers of the city ample practice in their vocations, aside from the fact that such procedure is more economical.

A careful perusal of the activities of the different branches of the city government made during the year would convince anyone that the city of Manila has accomplished the ends entrusted to it by the Philippine Legislature. Measures for the sanitation and safety, the furtherance of prosperity, and the promotion of morality, peace, good order, comfort, convenience, and general welfare of the city and its inhabitants have been taken. More new streets have been opened to traffic, connecting the various sections of the city with the commercial and industrial centers, while those existing have been maintained in good condition. More new schools have been opened during the year, the enrollment having increased from 27,626 in 1917 to 30,746 in 1918.

The general condition of state affairs at the end of the year is highly satisfactory.

U. CITY OF BAGUIO.

The cost of living in Baguio was rather high last year compared with previous years. The prices of all foodstuffs were raised, and had not the city intervened in the selling of meat and rice at the market many people, especially the poor and labor class, would have suffered. Through competition the city was able to keep the price of meat and rice in Baguio at a moderate rate.

In view of the rising of the cost of living in Baguio the city council adopted its Resolution No. 91, series 1918, granting bonuses to all city employees, at the rate of 15 per cent of the salary of those receiving ₱2,400 or more per annum; and at the rate of 25 per cent of the salary of those receiving less than ₱2,400 per annum.

Peace and order have been maintained during the year, and no public disorder or calamity of any kind took place in the city during the year.

The construction of a concrete water tank for the Baguio waterworks has been completed during the year, the city having spent the amount of ₱21,601.68 on this work.

The construction of the concrete market building to be used for selling meat, fish, and vegetables was continued during the year, the city having spent the amount of ₱25,004.19 on this work.

The construction of a concrete animal shed near the city market was also continued during the year and is now near completion, the city having spent the amount of ₱12,346.15 on this work.

The road system of Baguio was extended by the construction of 3 kilometers of first-class roads; 33 kilometers of first-class roads were maintained at a cost of ₱44,538.19; and the amount of ₱4,807.74 was expended by the city for the maintenance of third-class roads and trails.

Very respectfully,

RAFAEL PALMA,
Secretary of the Interior.

The GOVERNOR GENERAL, *Manila.*

140636—19—4

REPORT OF THE DEPARTMENT OF MINDANAO AND SULU.

THE GOVERNMENT OF THE PHILIPPINE ISLANDS,
DEPARTMENT OF MINDANAO AND SULU,
OFFICE OF THE GOVERNOR,
Zamboanga, P. I., March 15, 1919.

SIR: Owing to the lack of data, which have only been received during the last days of February, and to my absence from Zamboanga on inspection trips during the month of March, the preparation of this report has been delayed.

On December 16, 1918, I received from the director, bureau of non-Christian tribes, the following telegram:

"* * * You please prepare and sign Department governor's annual report to this office."

In compliance with the instructions contained in the above-quoted telegram and with the provisions of section 2585 (h) of the Administrative Code of 1917, I have the honor to submit this annual report on the affairs of the Department of Mindanao and Sulu for the year ending December 31, 1918. This is the fifth annual report submitted since the organization of the Department and the first which the undersigned submits in his capacity as acting Department governor. By reason of his manifold duties as director of the bureau of non-Christian tribes, Gov. Carpenter found himself under the necessity of spending the greater portion of his time in Manila and in inspection trips within his territorial jurisdiction, which comprises 40 per cent of the total territorial area of the Philippine Islands.

TERRITORIAL JURISDICTION.

With the exception of the Provinces of Misamis and Surigao, the Department of Mindanao and Sulu comprises the entire island of Mindanao and the Sulu Archipelago, including Cagayan de Sulu. To date there exists certain controversies between the Government of the Netherlands and the United States Government over the Palmas Island, located about 42 miles south of Mati. Davao, but it is believed that this island belongs to the Philippine Islands and within the territorial jurisdiction of Mindanao-Sulu. Arrangements are also being made whereby the islands comprising the Turtle Group, lying 18 miles from North Borneo, may come under the absolute control and administration of the provincial government of Sulu, Department of Mindanao and Sulu.

The following is the total estimated area of the seven Provinces comprising this Department:

	Square miles.
Agusan-----	4,294
Bukidnon-----	3,871
Cotabato-----	9,620
Davao-----	7,486
Lanao-----	2,439
Sulu-----	1,062
Zamboanga-----	6,383

Mindanao-Sulu comprises approximately one-third of the total area of the Philippine Islands and "exceeds in area the States of Connecticut, Delaware, New Hampshire, Rhode Island, and Vermont combined; the Kingdoms of Denmark and Holland together; Portugal or Greece." (Report Department governor, 1914.) By comparison with other Philippine Provinces it will be seen that Agusan is greater in area than Zambales, Batangas, Tarlac, La Union, and Batanes combined; Bukidnon is as large in area as the Provinces of Misamis, Antique, Bulacan, and Pampanga combined; Cotabato is greater in area than the Provinces of Cebu, Ilocos Sur, Iloilo, Pangasinan, Pampanga, Bulacan, Cavite, Laguna, and Rizal combined; Davao is as large in area as the Provinces of Sorsogon, Iloilo, Negros Oriental, and Batangas combined; Lanao is greater in area than Bohol and Rizal Provinces combined; Sulu is as large in area as

the Provinces of La Laguna, La Union, and the city of Manila combined; and Zamboanga is as large in area as the Provinces of Pangasinan, Cebu, Albay, and Misamis combined.

Population.

Province.	Christian.	Moham- medan.	Pagan.	Total.
1. Agusan.....	30,000	.....	35,000	65,000
2. Bukidnon.....	21,500	3,000	41,800	66,300
3. Cotabato.....	6,837	107,205	35,402	149,444
4. Davao.....	33,194	7,803	61,803	102,800
5. Lanao.....	6,201	75,980	1,550	83,711
6. Sulu.....	2,750	120,000	.....	122,750
7. Zamboanga.....	58,850	45,000	30,000	133,850
Total.....	159,132	358,988	205,555	723,675

This population, which is made up of different tribes, consists of what are popularly known as: Manobos, Mamauas, and Mandayas in Agusan; Bukidnon, Manobos, and Moros in Bukidnon; Maranaos and Monteses in Lanao; Maguindanaos, Tirurays, Bilanes, Manobos, Tagabillis, Dulaganes, and Ilanons in Cotabato; Bagobos, Manobos, Mandayas, Moros, Mangulangans, Guilangas, Tagacaolos, Bilanes, Atas, Culamans, and Tigdapaya in Davao; Taw-sugs (Joloanos), Samales, and Bajaos in Sulu; Yakanes, Samal Laud, Samal-Palau, Samal Lutanga, Ylanons, Subanos, and Calibuganes in Zamboanga, making a total of 29 in all, besides the Christian population, which term applies to all other inhabitants who are neither Mohammedans nor pagans.

The increase in population during 1918 is comparatively less than that during 1917, it being estimated that only about 12,000 immigrants have settled into the various Provinces in Mindanao, especially Davao. Of these 12,000 8,771 are laborers and homeseekers, who have been shipped by the immigration office to Davao, Zamboanga, and other points in Mindanao.

LEGISLATION.

The Administrative Code of the Department of Mindanao and Sulu was published in February, 1918, which is a compilation of the laws, executive orders, and circulars in force in Mindanao-Sulu. The Philippine Legislature has an absolute legislative control over the Department of Mindanao and Sulu, and all laws which it enacts are applicable in the entire Department unless otherwise specifically provided. The following acts have immediate application thereto:

Act No. 2727, an act appropriating funds for the necessary expenses of the Government of the Philippine Islands during the fiscal year ending December thirty-first, nineteen hundred and eighteen, and for other purposes.

Act No. 2766, an act to amend Act Numbered Twenty-three hundred and fifty-two, entitled "The census act."

The following acts are also applicable or may be made applicable in the Department of Mindanao and Sulu:

Act No. 2728, an act creating the bureau of commerce and industry, defining its functions, making appropriations therefor, and for other purposes.

Act No. 2733, an act to amend sections fourteen hundred and eighty-five, fourteen hundred and ninety-one, and fourteen hundred and ninety-two of the Administrative Code for the purpose of permitting the transfer of cigarettes under bond, and for other purposes.

Act No. 2743, an act to appropriate the sum of five thousand pesos for the free distribution of antityphoid vaccine among the duly qualified physicians of the Philippine Islands.

Act No. 2745, an act to amend Act Numbered Twenty-five hundred and ten, entitled "An act for the purpose of establishing a public welfare board for the Philippine Islands, and defining its powers, functions, and duties," and for other purposes.

Act No. 2747, an act to amend in certain particulars Act Numbered Twenty-six hundred and twelve, entitled "An act creating the Philippine National Bank."

Act No. 2751, an act to amend section twenty-six of Act Numbered Twenty-seven hundred and fifteen, entitled "An act to establish the Philippine Militia, provide for the enrollment of the unorganized militia, and the formation, organ-

ization, and government of the organized militia of the Philippine Islands, appropriating funds therefor, and for other purposes," reforming the personnel of the signal corps, creating a field signal battalion, increasing the aviation section, and creating positions of cadets for the aviation service, and for other purposes.

Act No. 2732, an act to amend section twenty-one of the Administrative Code, authorizing the presidents of townships to administer oaths.

Act No. 2735, an act to provide for the teaching of the Spanish language in the high schools of the government.

Act No. 2736, an act making appropriations for public works.

Act No. 2737, an act to amend section two of Act Numbered Twenty-six hundred and thirteen, as amended by section one of Act Numbered Twenty-seven hundred and thirteen, entitled "An act to amend section two of Act Numbered Twenty-six hundred and thirteen, entitled 'An act to improve the methods of production and the quality of tobacco in the Philippines and to develop the export trade therein.'"

Act No. 2738, an act establishing the mint of the Philippine Islands and appropriating funds for said purpose.

Act No. 2768, an act to amend section two hundred and six of the Administrative Code, authorizing the transfer of justices of the peace from one municipality to another.

Act No. 2772, an act authorizing the merger or consolidation of certain corporations, and for other purposes.

Act No. 2755, an act to authorize the establishment of municipal irrigation systems, and for other purposes.

Act No. 2756, an act to provide for the relief of the invalids of the Philippine revolutions or wars, appropriating funds for this purpose, and for other purpose.

Act No. 2758, an act providing for the establishment of stock herds and farms for the same, appropriates funds therefor, and for other purposes.

Act No. 2761, an act to amend sections eleven hundred and seventy-two, eleven hundred and seventy-six, and twelve hundred and two of the Administrative Code.

Act No. 2764, an act to amend Act Numbered Twenty-five hundred and seventy-three as amended by Act Numbered Twenty-six hundred and eighty-two.

Act No. 2775, an act to amend section fourteen hundred and ninety-three of the Administrative Code.

Act No. 2778, an act to amend the Philippine tariff law of nineteen hundred and nine, providing that products of the United States returning to the Philippine Islands from foreign ports shall be free of duty, under certain conditions.

Act No. 2779, an act to provide for the free entry in the Philippine Islands of the products of Guam.

Act No. 2780, an act to provide for the issue of bonds of the government of the Philippine Islands for the construction of a submarine and a destroyer.

Act No. 2781, an act amending first paragraph of section one thousand six hundred and sixty-one of the Administrative Code.

The following executive orders of the Governor General are applicable in the Department of Mindanao and Sulu:

Executive Order No. 10, an order reserving public land for school purposes, Malaybalay, Bukidon, Mindanao and Sulu.

Executive Order No. 18, an order reducing office hours of all Government bureaus and offices, etc., from April 1 to June 14, 1918.

Executive Order No. 15, an order regarding acceptance of Liberty loan bonds by Government officers, etc.

Executive Order No. 23, an order reserving public land for school purposes, municipal district of Silik, Cotabato, Mindanao Island.

Executive Order No. 27, an order reserving public land for provincial purposes, Cotabato, Province of Cotabato, Mindanao Island.

Executive Order No. 31, an order amending Executive Order No. 11, 1914.

Executive Order No. 32, an order reserving public land for road purposes, Zamboanga, Zamboanga Province, Mindanao and Sulu.

Executive Order No. 34, an order reserving public land for road purposes, Zamboanga, Zamboanga Province, Mindanao and Sulu.

Executive Order No. 48, an order reserving public land for constabulary purposes, municipal district of Glan, Cotabato, Mindanao Island.

Executive Order No. 53, an order reserving public land for school purposes, Cotabato Province, Mindanao Island.

Executive Order No. 59, an order reserving public land for agricultural school purposes, municipal district of Mallag, Bukidnon, Mindanao Island.

The following executive orders are also applicable or may be made applicable in the Department of Mindanao and Sulu:

Executive Order No. 7, an order amending civil service Rule XIII, prohibiting Government employees from purchase of property sold under order of courts.

Executive Order No. 17, an order regarding redemption of Spanish-Filipino and Mexican money.

Executive Order No. 18, an order regarding duties and powers of secretary of agriculture and natural resources, re food-production campaign.

Executive Order No. 24, an order re amendment of section 1, civil-service Rule XI.

Executive Order No. 25, an order constituting a council of defense for the Philippine Islands and designating the members thereof.

Executive Order No. 28, an order amending Executive Order No. 25, current series, re constitution of a council of defense for the Philippine Islands.

Executive Order No. 36, an order suspending all duties upon rice imported into the Philippine Islands until December 31, 1918.

Executive Order No. 37, an order regarding creation of a council of state.

Executive Order No. 41, an order publishing certain provisions of act of Congress of July 8, 1918, entitled "An act providing for the protection of the uniform of friendly nations, and for other purposes."

Executive Order No. 47, an order regarding appointment of members of council of state.

Executive Order No. 54, an order amending Executive Order No. 28, current series, re appointment of council of defense for Philippine Islands.

Executive Order No. 63, an order continuing in force until December 31, 1918, rates of duty on rice imported into the Philippine Islands.

POLICY OF GOVERNMENT.

There has been no change in the policy of the Department, with only the exception that during the year 1918 the transfer of the responsibility of the Department to the provincial governments has been made in a greater degree. The measure responds to the objective of placing said Provinces as rapidly as possible on an equal basis as the Provinces of the Visayas and Luzon. Filipinization has been continued in the changes of personnel, and the powers of local authorities have also been amplified by making them more responsible for the situation in their respective territorial jurisdictions. With respect to social activities the same policy of attraction has been followed, employing, however, wherever there be necessity therefor compulsory measures for the attendance in schools of Moro girls. The assimilation among the diverse tribes in Mindanao and Sulu in the first place, and with the inhabitants of other islands in the second place, has received preferential attention. The differences between one and the other are rapidly disappearing, and there has been noted daily greater community of sentiments, greater tolerance in their beliefs, and greater cordiality in their relations, under which they live, harmoniously carrying on a common work.

Taking last year's production as a basis, it has been observed that greater activity has been displayed in agriculture, the measures that have been adopted having resulted in the cultivation of greater areas of coconut grove and food products as well as the establishment and organization of provincial and private cattle ranches. Industry and commerce have also received adequate attention by the adoption of aid and protective measures, which stimulate the use of capital, assuring for the same more stability and wherever it is possible greater gains. No efforts have been spared to attract capitalists and laborers from Luzon and the Visayas by means of a continuous propaganda, and although the measures at the disposal of the Government do not satisfy all necessities, they have been, however, of positive value to increase the present development of Mindanao and Sulu, making the basis of its greatness and prosperity more and more solidly permanent.

ORGANIZATION.

There have not been great changes during the year that may be given under this heading with the exception of the organization into municipal districts of Qulamba, Daguma, Isulan, Salaman, Lebak, Sebu, Banisilan, and Subpangan.

Province of Cotabato, and the reorganization of the municipality of Parang of the same Province, converting it into a municipal district. This latter change was necessary. The existence of the municipality of Parang depended upon the military garrison stationed thereat, and at the departure of this organization the elements constituting the life of that town were taken away. For this reason it was deemed advisable to reorganize it into a municipal district.

In Davao plans are also being adopted for the organization of municipal districts in remote regions, especially on the western part of the Davao Gulf between the Provinces of Cotabato and Davao.

Municipal districts constitute the first step which succeeds the primitive organization of our people under the leadership of the headmen, and by which they are submitted under a form of government suitable to their moral and material welfare and their habits and customs. There is in each municipal district a president, a vice president, and a councilor for each barrio, all of whom are appointed by the provincial governor.

After the municipal districts the organized municipalities are next in order with an elective vice president and councilors and an appointive president. Under an almost similar organization but politically in a more advanced stage we have municipalities with elective officials including the president. The organization of these latter mentioned municipalities is exactly similar to that of the municipalities of the Provinces in the north.

The provincial boards of the Provinces within the Department are distinct from those found in the north, in that in Mindanao-Sulu the governor and the treasurer are appointed and the third member is elected by the vice presidents and councilors of the municipalities and organized municipal districts. With this exception and of other laws especially enacted to meet local conditions existing in each Province, the provincial organization in the Department is similar in other respects to that of the Provinces in the north.

The Department is a government upon which rests the control and higher immediate supervision of the entire affairs in Mindanao-Sulu. This government initiates and adopts general plans for the material development of the country and the moral, social, and political education of the inhabitants, and for the promotion of the general welfare, the unification of interests, and the amalgamation of the Provinces among themselves and with the rest of the islands. This is its mission, a mission that is vitally necessary to make this country prosperous and at the same time homogenous, a country always united in ideals and sentiments fully prepared to devote itself to the common work.

The Department organization comprises the following Provinces and their subordinate municipal corporations and municipal districts, as set forth in the following table:

PROVINCE OF AGUSAN.

MUNICIPALITIES.

- | | | |
|------------|----------------|---------------|
| 1. Butuan. | 2. Cabadbaran. | 3. Talacogon. |
|------------|----------------|---------------|

MUNICIPAL DISTRICTS.

- | | | |
|----------------|--------------------|-------------------|
| 1. Amparo. | 19. Jabonga. | 37. Remedios. |
| 2. Azpitia. | 20. La Paz. | 38. Rosario. |
| 3. Bahbah. | 21. Las Nieves. | 39. Segunto. |
| 4. Bakinging. | 22. Libertad. | 40. Salvacion. |
| 5. Balete. | 23. Loreto. | 41. San Ignacio. |
| 6. Basa. | 24. Los Arcos. | 42. San Isidro. |
| 7. Baylo. | 25. Maasin. | 43. San Luis. |
| 8. Borbon. | 26. Mambalili. | 44. San Mateo. |
| 9. Bunaguit. | 27. Manila. | 45. San Vicente. |
| 10. Bunawan. | 28. Manpinsahan. | 46. Santa Ines. |
| 11. Concordia. | 29. Martires. | 47. Santa Josefa. |
| 12. Corinto. | 30. Maygatasan. | 48. Santo Tomas. |
| 13. Cuevas. | 31. Milagros. | 49. Trento. |
| 14. Ebro. | 32. Novele. | 50. Tudela. |
| 15. Esperanza. | 33. Nuevo Sibagat. | 51. Verdu. |
| 16. Gracia. | 34. Nuevo Trabajo. | 52. Veruela. |
| 17. Guadalupe. | 35. Patrocinio. | 53. Violanta. |
| 18. Halapitan. | 36. Prosperidad. | 54. Waloe. |

PROVINCE OF BUKIDNON.

MUNICIPALITIES.

- | | | |
|----------------|------------|-------------|
| 1. Impasugong. | 3. Maluko. | 4. Talakag. |
| 2. Malaybalay. | | |

MUNICIPAL DISTRICTS.

- | | | |
|----------------|--------------|---------------|
| 1. Baungon. | 4. Libona. | 7. Maramag. |
| 2. Claveria. | 5. Lourdes. | 8. Napaliran. |
| 3. Ginbaluron. | 6. Malitbog. | 9. Sumilau. |

PROVINCE OF COTABATO.

MUNICIPALITY.

1. Cotabato.

MUNICIPAL DISTRICTS.

- | | | |
|--------------|----------------|----------------------|
| 1. Auang | 14. Gambar | 27. Maganuy |
| 2. Balatikan | 15. Glan | 28. Nuling |
| 3. Balut | 16. Isulan | 29. Parang |
| 4. Banisilan | 17. Kabakan | 30. Pikit-Pagalungan |
| 5. Barira | 18. Kalanganan | 31. Reina-Regente |
| 6. Buayan | 19. Kiamba | 32. Salaman |
| 7. Bugasan | 20. Kidapawan | 33. Sebu |
| 8. Buldun | 21. Kitubud | 34. Silik |
| 9. Buluan | 22. Kling | 35. Subpangan |
| 10. Carmen | 23. Koronadal | 36. Talayan |
| 11. Daguma | 24. Lebak | 37. Tumbau. |
| 12. Dinaig | 25. Libungan | |
| 13. Dulauan | 26. Liguasan | |

PROVINCE OF DAVAO.

MUNICIPALITIES.

- | | | |
|------------|----------|----------------|
| 1. Baganga | 4. Davao | 6. Mati |
| 2. Caraga | 5. Manay | 7. Santa Cruz. |
| 3. Kateel | | |

MUNICIPAL DISTRICTS.

- | | | |
|------------|-------------|------------|
| 1. Gulanga | 4. Pantukan | 7. Sigaboy |
| 2. Malita | 5. Samal | 8. Tagum. |
| 3. Monkayo | 6. Saug | |

PROVINCE OF LANAŌ.

MUNICIPALITIES.

- | | | |
|-------------|-----------|--------------|
| 1. Dansalan | 2. Iligan | 3. Malabang. |
|-------------|-----------|--------------|

MUNICIPAL DISTRICTS.

- | | | |
|---------------|-----------------|------------------|
| 1. Bakulud | 13. Kolambungan | 25. Pantar |
| 2. Balut | 14. Lumbatan | 26. Pantau Ragat |
| 3. Bayang | 15. Madalum | 27. Pualas |
| 4. Binidayan | 16. Madamba | 28. Saglaran |
| 5. Bubung | 17. Maging | 29. Sungud |
| 6. Buru'un | 18. Mandulug | 30. Tamparan |
| 7. Butig | 19. Marantau | 31. Taraka |
| 8. Ditsan | 20. Maslu | 32. Tatarikan |
| 9. Ganasi | 21. Malundu | 33. Tubaran |
| 10. Gata | 22. Mumungan | 34. Tugaya |
| 11. Kapal | 23. Munai | 35. Uatu. |
| 12. Kapatagan | 24. Nunungan | |

PROVINCE OF SULU.

MUNICIPALITY.

1. Jolo.

MUNICIPAL DISTRICTS.

- | | | |
|---------------|-----------------|------------------|
| 1. Balimbing. | 10. Marungas. | 19. Simunul. |
| 2. Banaran. | 11. Panamau. | 20. Sitangkai. |
| 3. Bung'gau. | 12. Pangutaran. | 21. South Ubian. |
| 4. Gituñg. | 13. Pansul. | 22. Talipau. |
| 5. Kagayan. | 14. Parang. | 23. Tandub. |
| 6. Laparan. | 15. Pata. | 24. Tandubas. |
| 7. Latl. | 16. Patikul. | 25. Tapul. |
| 8. Lu'uk. | 17. Siasi. | 26. Tangkil. |
| 9. Maimbung. | 18. Silangkan. | |

PROVINCE OF ZAMBOANGA.

MUNICIPALITIES.

- | | | |
|-------------|--------------|---------------|
| 1. Dapitan. | 3. Isabela. | 5. Zamboanga. |
| 2. Dipolog. | 4. Lubungan. | |

MUNICIPAL DISTRICTS.

- | | | |
|----------------|------------------|------------------|
| 1. Bangaan. | 6. Malusu. | 11. Sindangan. |
| 2. Kabasalan. | 7. Margosatubig. | 12. Sirawai. |
| 3. Kumalarang. | 8. Panganuran. | 13. Taluksangay. |
| 4. Lamitan. | 9. Sakul. | 14. Tukuran. |
| 5. Malaya. | 10. Sibuko. | |

GENERAL STATEMENT OF CONDITIONS AT THE CLOSE OF THE YEAR.

Apart from economic conditions, the development of which has been greatly accentuated during 1918, it is gratifying to note that, as the fruit of a policy inaugurated five years ago in Mindanao and Sulu, the retirement of the military garrisons from the Provinces of Lanao, Cotabato, and Sulu, which from time immemorial took charge of the maintenance of public order, has been accomplished. This step is radical and politically of essential importance. One well familiar with the conditions of these Provinces can form an idea of the significance of this step. It appears really unbelievable that this could have been possible without the slightest alteration of public order. However, it is a fact that in Lanao as in Jolo, Cotabato, and other islands of the Department there has been observed last year a complete peace which was disturbed only by Sampang and his companions, who during the months of June, July, August, and September, attempted to offer resistance to the authorities of Sulu, but the same has terminated with the surrender of said outlaws in the middle part of September, 1918.

Since the retirement of the military public order has been maintained exclusively by the civil government through the constabulary, which earned a creditable record of excellent work.

The administration of public affairs within the territorial jurisdiction of the Department of Mindanao and Sulu may be briefly summarized as follows:

1. Gradual increase of the powers vested in the provincial and municipal governments for their complete amalgamation with those of the Visayas and Luzon.

2. Fillipinization of Government personnel.

3. Complete responsibility of the civil government in the maintenance of public order.

4. Extension of Government control over regions inhabited by Mohammedans and pagans.

5. Continuous development of the natural resources, industry, commerce, and agriculture, and especially cattle raising, which has now received great stimulus.

6. Continuous development of the social, political, and material conditions of the Mohammedans and pagans with their consequent rapid amalgamation with the inhabitants of the other islands.

FINANCE.

Department.—By operation of the appropriation act of 1919, the Department government ceased to be a separate financial entity on December 31, 1918, to become a part of the bureau of non-Christian tribes, thus placing the De-

REPORT OF GOVERNOR GENERAL OF PHILIPPINE ISLANDS.

partment under the same financial and accounting basis as other subordinate branches of insular bureaus.

As stated in previous reports, the Department is dependent upon appropriations from the insular treasury, from which the following appropriations for general current administrative expenses and for operation of steamship service were made for the year covering this report:

General administrative expenses-----	₱129, 042. 00
Operation of vessels:	
Steamship <i>Mindanao</i> -----	₱132, 488. 00
Steamship <i>Tablas</i> -----	132, 284. 00
Steamship <i>Imam</i> -----	47, 158. 00
	<hr/>
	311, 930. 00
Less probable receipts-----	150, 000. 00
	<hr/>
	161, 930. 00
Total insular appropriation-----	290, 972. 00
Amount collected from Provinces on account of legal services-----	9, 530. 00
	<hr/>
Total amount available-----	300, 502. 00
Expenditures during the year were as follows:	
Current expenses, general administration-----	₱149, 157. 11
Salaries of officers and employees-----	75, 603. 40
Wages-----	4, 023. 21
Consumption of materials and supplies-----	7, 750. 67
Postal, telegraph, telephone, and cable service-----	10, 493. 30
Traveling expenses of personnel-----	8, 266. 05
Other service-----	43, 020. 48
	<hr/>
Maintenance expense-----	4, 059. 39
Maintenance of public buildings-----	3, 407. 63
Maintenance of repairs of equipment-----	651. 56
	<hr/>
Commercial and industrial units, vessels-----	246, 694. 72
Salaries of officers and employees-----	35, 628. 60
Wages-----	34, 733. 17
Consumption of materials and supplies-----	146, 376. 51
Postal, telegraph, and telephone service-----	367. 00
Traveling expenses of personnel-----	35. 20
Other service-----	9, 780. 00
Maintenance and repairs service-----	19, 774. 24
	<hr/>
Total expenditures-----	399, 911. 22
As shown above, the expenditures exceeded the appropriations by ₱99,409.22, which deficit was covered by appropriations made by the administrative council under the provisions of section 2584 (a) from income derived from the following sources:	
Jolo Arrastre-----	₱1, 313. 79
Zamboanga Arrastre-----	767. 60
Coaling station-----	69, 668. 13
Steamship operation:	
Steamship <i>Mindanao</i> -----	₱85, 156. 48
Steamship <i>Tablas</i> -----	98, 643. 99
Steamship <i>Imam</i> -----	1, 591. 80
Schooner <i>Mustavit</i> -----	850. 00
	<hr/>
	186, 242. 27
Less estimated amount deducted from budget--	150, 000. 00
	<hr/>
	36, 242. 27
Operation of Army transports-----	22, 844. 34
	<hr/>
Total-----	130, 836. 13

The Department has exercised the utmost care in curtailing expenditures to a degree compatible with efficiency and good administration, but on account of the exceptional conditions inherent in the administration of the affairs of as vast a territory as Mindanao-Sulu with its heterogeneous population there always arise emergency expenditures which must be met to insure a continuity of work and to enable the Government to cope with any situation which may endanger its prestige and retard its development policy not only in economic line but also in the extension of government control. Fortunately the semicommercial activities of the Department has afforded substantial returns to meet the deficiencies of insular appropriations granted the Department, besides permitting the financing of important public works and civic improvements.

Special mention is made in this report of the courtesy of the military authorities in allowing the Department the use of Army transports not otherwise needed for military purposes, for the transportation of commercial cargo, an arrangement which enabled the moving to markets of considerable quantity of lumber and agricultural produce which for lack of commercial transportation were overtaxing the capacity of lumber yards and storehouses to the great prejudice of manufacturers and producers and their dependents, not mentioning the disastrous effect which such dormant stock had on business in general. For this source a profit of ₱22,844.34 was made as shown above.

Provincial and municipal.—The aid from insular funds allotted to the Provinces of the Department "for the extension and maintenance of government control" is as follows:

Agusan	₱55,000
Bukidnon	45,000
Cotabato	90,000
Davao	55,000
Lanao	60,000
Sulu	40,000
Zamboanga	25,000
Total	370,000

The Provinces of the Department, on the other hand, have contributed to the insular government on account of internal revenue collections during the year the sum of ₱626,206.58, which compared with the collections in 1915, amounting to ₱246,754.37, give an increase of ₱379,452.31, or 153.7 per cent.

To better demonstrate in a clear and tangible manner the effective enforcement of taxes made in the Provinces of the Department, the following statements compiled from the administrative reports of provincial treasurers and other available reports have been prepared and are attached herewith:

Comparative statement of internal-revenue collections.

Statements of revenue collections and other receipts, year 1918, for each Province.

Statements of revenue collections and other receipts, year 1915, for each Province.

Summary of revenue collections, insular, provincial, and municipal, year 1918.

Summary of revenue collections, insular, provincial, and municipal, year 1915.

Comparative statement of revenue collections, insular, provincial, and municipal.

In preparing the above statements the income of 1915 has been taken as the basis for comparison, for from that year the same fiscal system prevailing in the regularly organized Provinces has been adopted in anticipation of the eventual elimination of the Department government and the granting of a regular charter to our Provinces and municipalities.

The financial progress reflected in the above statements has exceeded the most optimistic expectations which could have been made by those who framed the program of government in the Department, considering the fact that prior to the establishment of the new régime the inhabitants of Mindanao-Sulu, in the great majority, were not then conscious of their duty to contribute toward the maintenance of government, and they had the belief that taxes constituted an onerous burden which the Government imposed upon them as vassals and subjects. This erroneous conception of the people as regards taxes has been gradually eliminated by the organization of municipal districts which permitted the natives to have direct participation in the management of local govern-

mental affairs, thus giving them opportunity to visualize and comprehend the benefits which the entire community derives from the payment of taxes. As shown in the comparative statement of revenue—insular, provincial, and municipal—the increases of receipts in 1918 as compared with those of 1915 are very encouraging, bringing the per capita tax in Mindanao-Sulu a little below that which existed in 1908 throughout the islands.

If Government management depends upon the number of inhabitants in each region without regard to its territorial extent, then it may be safe to assume that the Provinces of the Department, with very few exceptions, could depend on their income to maintain local governments adequate to exercise a nominal rather than an effective control of affairs; but as the matter of territorial area constitutes an important factor in the development work of a Government as would naturally be the case in Mindanao-Sulu, with such an extensive and unexplored territory to administer and a widely scattered population to control, it will be several years more before our Provinces could be made independent from insular aid, necessary to promote their moral and material progress which will have to be pushed through by the maintenance of an efficient and effective governmental organization and by providing adequate means to carry on the constructive work now in progress to a successful conclusion. After all, insular aid granted to Mindanao-Sulu is nothing more than a productive investment calculated to foster its vast economic possibilities which will bring great material returns to the country in general, at the same time hasten the realization of the desired solidarity and unification of the Filipino people.

Real-property tax.—Before the implantation of the Department government in Mindanao-Sulu the real-property tax was almost limited to the regularly organized municipalities and the nucleus of the non-Christian population, which constitutes the great majority of the inhabitants, hardly had a conception of the significance and purposes of this tax, as evidenced by the fact that in the Province of Bukidnon the same did not exist in 1915.

At the beginning of the year 1915 the same real-property assessment in force in the regularly organized Provinces was adopted and extended throughout the territorial jurisdiction of the Department, and its application has brought about a systematic revision of real property, thereby increasing the revenues of our Provinces and municipalities. Attention is respectfully invited to the attached comparative statements of real-property assessments.

In accordance with Table No. 62 of the Statistical Bulletin No. 1 of the Bureau of Commerce and Industry, the average real-property tax per capita in the Philippine Islands was ₱0.688 in 1917. Comparing it with the average of real-property tax per capita of ₱0.44 in Mindanao-Sulu, as shown in the statement of real-property assessment existing on December 31, 1918, the difference is insignificant.

Summary of revenue collections, insular, provincial, and municipal, Department of Mindanao and Sulu.

Province.	Internal revenue, insular.	Provincial-municipal.		Total.	Popula- tion.	Tax per capita.
		Revenue.	Inc. revenue.			
YEAR 1918.						
Agusan	₱39,707.95	₱84,869.56	₱20,658.62	₱145,236.13	65,000	₱2.22
Bukidnon	7,535.76	53,022.92	8,928.28	69,486.96	66,000	1.05
Cotabato	39,460.01	97,410.32	21,233.57	158,103.90	149,444	1.06
Davao	209,079.62	231,538.77	45,694.79	486,313.18	102,800	4.73
Lanao	21,792.16	80,267.87	24,442.98	126,502.51	83,711	1.51
Sulu	103,923.32	115,601.07	49,364.48	268,888.87	122,750	2.19
Zamboanga	204,707.86	281,129.02	74,345.23	560,182.05	133,650	4.11
Total	626,206.68	943,839.03	244,667.95	5,814,713.60	723,355	2.52
YEAR 1915.						
Agusan	16,102.47	40,337.68	7,823.55	64,263.70	65,000	.99
Bukidnon	2,292.59	27,148.78	1,528.45	30,969.82	66,000	.47
Cotabato	18,431.30	62,906.81	11,783.79	93,211.90	149,444	.63
Davao	50,165.75	92,542.79	20,956.78	163,665.32	102,800	1.59
Lanao	12,871.91	66,070.10	25,304.13	104,246.14	83,711	1.24
Sulu	44,184.04	69,153.31	44,000.22	157,337.57	122,750	1.28
Zamboanga	102,706.31	189,953.39	41,231.72	333,891.42	133,650	2.49
Total	246,754.37	548,202.86	152,628.64	947,585.87	723,355	1.31

*Comparative statement of revenue collections, insular, provincial, and municipal,
Department of Mindanao-Sulu.*

Province.	1918		1915		Increase.		
	Amount.	Tax per capita.	Amount.	Tax per capita.	Amount.	Tax per capita.	Per cent.
Agusan.....	P145,236.13	P2.23	P64,263.70	P0.99	P80,973.43	P1.24	126.00
Bukidnon.....	69,486.96	1.05	30,909.82	.47	38,517.14	.60	124.30
Cotabato.....	158,103.90	1.06	93,211.90	.62	64,892.00	.44	69.60
Davao.....	496,313.18	4.73	163,665.32	1.59	332,647.86	3.14	197.00
Lanao.....	126,502.51	1.51	104,246.14	1.24	22,256.37	.27	21.30
Sulu.....	268,888.87	2.19	157,337.57	1.28	111,551.30	.91	70.90
Zamboanga.....	560,182.05	4.11	333,891.42	2.49	226,290.63	1.69	67.77
Total.....	1,814,713.60	2.51	947,585.87	1.31	867,128.73	1.19	91.51

Tax per capita in the Philippine Islands.

(Table No. 57, Statistical Bulletin No. 1, Bureau of Commerce and Industry.)

1908.....	P3,485	1913.....	P4,282
1909.....	3,789	1914.....	3,603
1910.....	4,057	1915.....	4,218
1911.....	4,241	1916.....	4,400
1912.....	4,478	1917.....	5,358

Comparative statement of real-property assessments, Department of Mindanao and Sulu.

TAXABLE.

Province.	1918		1915		Increase.		Per cent.	
	Parcels.	Valuation.	Parcels.	Valuation.	Parcels.	Valuation.	Parcels.	Valuation.
Agusan.....	10,254	P1,769,440	7,261	P1,329,720	2,993	P439,720	41	33
Bukidnon.....	12,678	2,101,620	None.	None.	12,678	2,101,620	100	100
Cotabato.....	1,158	878,001	550	425,837	608	452,164	110	106
Davao.....	14,125	9,935,161	3,532	1,702,558	10,593	8,232,603	297	483
Lanao.....	2,062	609,085	1,618	487,130	444	121,955	27	25
Sulu.....	1,668	1,139,010	1,257	532,255	1,411	606,755	548	113
Zamboanga.....	18,917	9,462,496	12,101	5,929,845	6,816	3,532,651	56	59
Total.....	60,862	25,894,813	25,319	10,407,345	35,543	15,487,468	140	148

EXEMPT.

Province.	1918		1915		Increase.		Per cent.	
	Parcels.	Valuation.	Parcels.	Valuation.	Parcels.	Valuation.	Parcels.	Valuation.
Agusan.....	4,381	P349,270	950	P196,330	3,431	P152,940	3.61	77
Bukidnon.....	962	117,420	None.	None.	962	117,420	100	100
Cotabato.....	279	126,070	68	33,985	211	92,085	310	271
Davao.....	577	415,279	1,017	220,426	(440)	194,853	(43)	88
Lanao.....	247	68,343	214	87,870	33	(19,527)	15	(22)
Sulu.....	176	95,513	32	31,650	144	63,863	45	201
Zamboanga.....	2,556	1,300,149	1,836	520,836	720	779,313	39	1.49
Total.....	9,178	2,472,044	4,117	1,091,097	5,061	1,380,947	122	126

Real estate assessment on Dec. 1, 1918, Department of Mindanao and Sulu.

Provinces.	Assessed value of real estate.			Real-estate tax.	Per capita.	
	Taxable.	Exempt.	Total.		Value of real-estate.	Real-estate tax.
Agusan.....	P1,769,440	P349,270	P2,118,710	P22,118	P32,595	P0.34
Bukidnon.....	2,101,620	17,420	2,119,040	26,270	32,108	.39
Cotabato.....	878,001	126,070	1,004,071	10,975	6,718	.07
Davao.....	9,935,161	415,279	10,350,440	124,190	100,685	1.21
Lanao.....	609,085	68,343	677,428	7,613	8,092	.09
Sulu.....	1,139,010	95,513	1,234,523	14,237	10,056	.11
Zamboanga.....	9,462,496	1,300,149	10,762,645	118,281	80,828	.89
Total.....	25,894,813	2,372,044	28,266,857	323,685	39,077	.44

Statement of revenue collections and other receipts, year 1915.

PROVINCE OF AGUSAN.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P4,329.50	P7,657.00	P3,337.50	P1,070.50	P16,394.50
Real-property tax—					
Current year.....	1,354.31	677.20	2,794.54		4,826.05
Previous years.....	408.19	204.14	820.23		1,432.56
Internal-revenue allotment.....	2,869.64	2,869.64	3,358.20	1,860.04	10,957.52
Weights and measures.....	181.92		187.78	15.40	385.10
Licenses—					
Internal-revenue.....			3,786.25	137.50	3,923.75
Municipal.....			2,418.20	50.00	2,468.20
Total revenue from taxation.....	9,143.56	11,407.98	16,652.70	3,133.44	40,337.68
Incidental revenue:					
Interest on deposits and loans.....	7.50				7.50
Registry of property.....	39.00				39.00
Registry of mining claims.....	94.00				94.00
Draft and transfer premiums.....	7.50				7.50
Recorder's fees.....	8.80				8.80
Fisheries.....			1,984.22		1,984.22
Cattle registration.....			301.00	10.00	311.00
Rents, profits, and privileges.....			2,080.37		2,080.37
Miscellaneous.....	120.63	90.89	50.23		261.75
Fines and penalties—					
Cedulas.....	564.50	129.00	467.50	57.00	1,218.00
Real-property tax.....	165.68	78.03	326.50		570.21
Weights and measures.....	103.33		83.27	7.50	194.10
Licenses—					
Internal-revenue.....			10.00		10.00
Municipal.....					
Miscellaneous.....	36.00		1,033.10	28.00	1,097.10
Total incidental revenue.....	1,146.94	297.92	6,276.19	74.50	7,823.55
Other receipts:					
Vessels and launches.....	8,256.77				8,256.77
Telegraph and telephones.....					
Transfer of funds.....		572.60			572.60
Miscellaneous.....	14.54			347.52	362.06
Loans repaid to province.....	1,000.00				1,000.00
Aid from insular government.....	6,692.10	6,821.33			13,513.43
Aid from Department governments.....	55,180.89	5,000.00			60,180.89
Total other receipts.....	71,144.30	12,393.93		347.52	83,885.75
Total income.....	81,434.80	24,099.83	22,928.89	3,555.46	132,048.98
SUMMARY.					
Total revenue from taxation.....	9,143.56	11,407.98	16,652.70	3,133.44	40,337.68
Total incidental revenue.....	1,146.94	297.92	6,276.19	74.50	7,823.55
Total revenue receipts.....	10,290.50	11,705.90	22,928.89	3,207.94	48,161.23
Total other receipts.....	71,144.30	12,393.93		347.52	83,885.75
Total income.....	81,434.80	24,099.83	22,928.89	3,555.46	132,048.98

PROVINCE OF BUKIDNON.

Revenue from taxation:					
Cedulas.....	P2,303.00	P4,531.00		P2,303.00	P9,137.00
Internal-revenue allotment.....	2,865.28	2,865.28		5,730.52	11,461.08
Weights and measures.....	59.60			59.60	119.20
Licenses, internal-revenue.....				17.50	17.50
Road tax, Act 1396.....			P6,414.00		6,414.00
Total revenue from taxation.....	5,227.88	7,396.28	6,414.00	8,110.62	27,148.78
Incidental revenue:					
Registry of mining claims.....	28.00				28.00
Cattle registration.....				581.00	581.00
Miscellaneous.....	2.93	474.02			476.95
Fines and penalties—					
Cedulas.....	111.00	140.00		111.00	362.00
Measures.....	17.00			17.00	34.00
Miscellaneous.....				46.50	46.50
Total incidental revenue.....	158.93	614.02		755.50	1,528.45

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF BUKIDNON—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Other receipts:					
Land transportation.....	P2,510.99				P2,510.99
Telegraphs and telephones.....	540.00				540.00
Aid from insular government.....	5,159.28	P7,099.27	P225.98		12,484.53
Aid from Department government.....	39,680.88	6,000.00			45,680.88
Transfer of funds.....		4,000.00			4,000.00
Total other receipts.....	47,891.15	17,099.27	225.98		65,216.40
Total income.....	53,277.96	25,109.57	6,639.98	P8,866.12	93,893.63
SUMMARY.					
Total revenue from taxation.....	5,227.88	7,396.28	6,414.00	8,110.62	27,148.78
Total incidental revenue.....	158.93	614.02		755.50	1,528.45
Total revenue receipts.....	5,386.81	8,010.30	6,414.00	8,866.12	28,677.23
Total other receipts.....	47,891.15	17,099.27	225.98		65,216.40
Total income.....	53,277.96	25,109.57	6,639.98	8,866.12	93,893.63

PROVINCE OF COTABATO.

Revenue from taxation:					
Cedulas.....	P4,995.50	P9,961.00	P1,759.00	P3,234.00	P19,969.50
Real-property tax—					
Current year.....	798.42	396.12	1,336.65	120.90	2,652.09
Previous years.....	71.49	35.76	127.97		235.22
Internal-revenue allotment.....	7,909.84	7,909.84	726.21	14,969.76	31,535.65
Weights and measures.....	85.80		68.90	16.90	171.60
Licenses—					
Internal-revenue.....			3,612.25		3,612.25
Municipal.....			4,420.50	400.00	4,820.50
Total revenue from taxation.....	13,861.05	18,322.72	12,051.48	18,761.56	62,996.81
Incidental revenue:					
Interest on deposits and loans.....	18.74				18.74
Registry of mining claims.....	36.00				36.00
Draft and transfer premiums.....	210.72				210.72
Recorder's fees.....	1.20				1.20
Fisheries.....			84.00		84.00
Cattle registration.....			140.00	87.00	227.00
Rents, profits, and privileges.....			3,868.38	42.00	3,910.38
Rentals.....	20.00				20.00
Miscellaneous.....	51.17		5,012.97	113.56	5,177.70
Fines and penalties—					
Cedulas.....	119.00	218.00	61.00	60.50	458.50
Real-property tax.....	40.99	20.49	69.15	2.95	133.58
Weights and measures.....	60.45		40.70	19.75	120.90
Miscellaneous.....			1,385.07		1,385.07
Total incidental revenue.....	558.27	238.49	10,661.27	325.76	11,783.79
Other receipts:					
Vessels and launches.....	60.00	9,910.17			9,970.17
Land transportation.....	.80				.80
Telegraphs and telephones.....	.40				.40
Ice plant.....	4,190.89				4,190.89
Provincial hospitals.....	6.00				6.00
Aid from insular government.....	1,043.69	23,649.67		112.28	24,805.64
Aid from department government.....	126,389.98				126,389.98
Total other receipts.....	131,691.76	33,569.84		112.28	165,363.88
Total income.....	146,111.08	52,121.05	22,712.75	19,199.60	240,144.48
SUMMARY.					
Total revenue from taxation.....	13,861.05	18,322.72	12,051.48	18,761.56	62,996.81
Total incidental revenue.....	558.27	238.49	10,661.27	325.76	11,783.79
Total revenue receipts.....	14,419.32	18,561.21	22,712.75	19,087.32	74,780.60
Total other receipts.....	131,691.76	33,569.84		112.28	165,363.88
Total income.....	146,111.08	52,121.05	22,712.75	19,199.60	240,144.48

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF DAVAO.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P9,312.50	P17,125.00	P6,298.50	P1,555.00	P34,291.00
Real-property tax—					
Current year.....	4,789.74	1,572.80	5,333.81	1,015.49	12,511.84
Previous years.....	1,155.38	381.00	1,207.85	280.81	3,025.04
Internal-revenue allotment.....	6,066.56	6,066.56	4,961.76	8,351.32	26,066.20
Weights and measures.....	356.95		274.55	68.30	699.80
Licenses—					
Internal revenue.....			3,901.80	471.25	4,373.05
Municipal.....			10,565.52	346.70	10,912.22
Total revenue from taxation.....	22,251.06	25,746.05	32,458.79	12,086.87	92,542.79
Incidental revenue:					
Draft and transfer premiums.....	6.50				6.50
Recorder's fees.....	1.55				1.55
Fisheries.....			1,332.48	24.00	1,356.48
Cattle registration.....			4,635.00	252.00	4,887.00
Rents, profits, and privileges.....			5,095.24	.50	5,095.74
Miscellaneous.....	279.50		2,806.00	72.75	3,158.25
Fines and penalties—					
Cedulas.....	463.50	849.00	417.00	4.50	1,734.00
Real-property tax.....	691.62	230.50	753.97	124.62	1,800.71
Weights and measures.....	218.31		164.49	42.49	425.29
Licenses, municipal.....				4.80	4.80
Miscellaneous.....			1,856.46		1,856.46
Total incidental revenue.....	1,660.98	1,079.50	17,690.64	525.66	20,956.78
Other receipts:					
Dock rentals.....		890.00			890.00
Cemetery collections.....			2.50		2.50
Voluntary contributions.....	.50		10.00		10.50
Miscellaneous.....			172.70		172.70
Aid from insular government.....	1,050.00	18,727.11			19,777.11
Aid from Department government.....	153,462.99	6,500.00			159,962.99
Repayment of loans.....	1,250.00				1,250.00
Total other receipts.....	155,763.49	26,117.11	185.20		182,065.80
Total income.....	179,675.55	52,942.66	50,334.63	12,612.53	295,565.37
SUMMARY.					
Total revenue from taxation.....	22,251.06	25,746.05	32,458.79	12,086.87	92,542.79
Total incidental revenue.....	1,660.98	1,079.50	17,690.64	525.66	20,956.78
Total revenue receipts.....	23,912.06	26,825.55	50,149.43	12,612.53	113,499.57
Total other receipts.....	155,763.49	26,117.11	185.20		182,065.80
Total income.....	179,675.55	52,942.66	50,334.63	12,612.53	295,565.37

PROVINCE OF LANAO.

Revenue from taxation:					
Cedulas.....	P6,401.50	P12,673.00	P6,406.50		P25,481.00
Real-property tax—					
Current year.....	749.20	374.00	1,494.66		2,617.86
Previous years.....	931.35	231.47	890.12		2,052.94
Internal-revenue allotment.....	7,115.12	7,115.12	13,800.70		28,030.94
Weights and measures.....	118.55		100.40		218.95
Licenses—					
Internal revenue.....			1,324.50		1,324.50
Municipal.....			6,373.31		6,373.31
Total revenue from taxation.....	15,315.72	20,394.19	30,360.19		66,070.10
Incidental revenue:					
Interest on deposits and loans.....	41.32				41.32
Registry of mining claims.....	158.00				158.00
Fisheries.....			596.91		596.91
Cattle registration.....			654.00		654.00
Rents, profits and privileges.....			8,224.88		8,224.88
Miscellaneous.....	11,829.15		1,793.40		13,622.55
Fines and penalties—					
Real-property tax.....	317.98	98.23	370.56		786.77
Miscellaneous.....			1,199.70		1,199.70
Total incidental revenue.....	12,346.45	98.23	12,850.45		25,394.13

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF LANAO—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Other receipts:					
Vessels and launches.....	P1,267.24				P1,267.24
Land transportation.....	1,725.50	P375.00			2,100.50
Telegraphs and telephones.....	1,008.00				1,008.00
Provincial hospitals.....	1,182.24				1,182.24
Supplies brought into accounts.....	287.52				287.52
Aid from Insular government.....	2,942.44	16,279.16			19,221.60
Aid from Department government.....	128,908.52	18,500.00			147,408.52
Repayment of loans.....	3,500.00				3,500.00
Total other receipts.....	140,821.76	35,154.16			175,975.92
Total income.....	168,483.93	55,646.58	P43,219.64		267,350.15
SUMMARY.					
Total revenue from taxation.....	15,315.72	20,394.19	30,360.19		66,070.10
Total incidental revenue.....	12,346.45	98.23	12,859.45		25,304.13
Total revenue receipts.....	27,662.17	20,492.42	43,219.64		91,374.23
Total other receipts.....	150,821.76	35,154.16			175,975.92
Total income.....	168,483.93	55,646.58	43,219.64		267,350.15

PROVINCE OF SULU.

Revenue from taxation:					
Cedulas.....	P6,756.00	P13,479.00	P2,310.15	P6,532.00	P29,077.15
Real-property tax—					
Current year.....	1,275.46	457.06	1,555.91	116.53	3,404.96
Previous years.....	132.57	56.32	96.85	42.57	328.11
Internal-revenue allotment.....	9,220.64	9,220.64	368.56		18,809.84
Weights and measures.....	178.95		155.00	15.75	349.70
Licenses—					
Internal-revenue.....			3,996.25	222.50	4,218.75
Municipal.....			12,666.80	298.00	12,964.80
Total revenue from taxation.....	17,563.62	23,213.02	21,149.52	7,227.15	69,153.31
Incidental revenue:					
Interest on deposits and loans.....	156.48				156.48
Draft and transfer premiums.....	7.13				7.13
Rentals.....	5,639.12		6,472.15		12,111.27
Fisheries.....			17.50	362.06	379.58
Cattle registration.....			1,912.00	6,061.00	7,973.00
Rents, profits and privileges.....			12,163.33	736.17	12,899.50
Miscellaneous.....			4,830.03	2,306.80	7,136.83
Fines and penalties—					
Cedulas.....	629.75	1,165.50	233.00	425.25	2,453.50
Real-property tax.....	51.77	17.96	39.24	21.63	130.60
Weights and measures.....	281.50		260.00	17.05	558.55
Licenses, internal-revenue.....			194.28		194.28
Total incidental revenue.....	6,765.75	1,183.46	26,121.53	9,929.48	44,000.22
Other receipts:					
Vessels and launches.....	846.38				846.38
Provincial shop.....	26.10				26.10
Aid from Insular government.....	2,116.15	23,303.32			25,419.47
Aid from Department government.....	130,159.89	42,500.00			172,659.89
Transfer of funds.....				3,131.40	3,131.40
Total other receipts.....	133,148.52	65,803.32		3,131.40	202,083.24
Total income.....	157,477.89	90,199.80	47,271.05	20,288.03	315,236.77
SUMMARY.					
Total revenue from taxation.....	17,563.62	23,213.02	21,149.52	7,227.15	69,153.31
Total incidental revenue.....	6,765.75	1,183.46	26,121.53	9,929.48	44,000.22
Total revenue receipts.....	24,329.37	24,396.48	47,271.05	17,156.63	113,153.53
Total other receipts.....	133,148.52	65,803.32		3,131.40	202,083.24
Total income.....	157,477.89	90,199.80	47,271.05	20,288.03	315,236.77

Statement of revenue collections and other receipts, year 1915—Continued.

PROVINCE OF ZAMBOANGA.

Account.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P14,316.50	P27,850.00	P10,783.50	P3,443.00	P56,393.00
Real-property tax—					
Current year.....	9,928.15	4,964.08	19,676.61	10.81	34,579.65
Previous years.....	10,490.33	2,453.12	9,223.26		22,166.71
Internal-revenue allotment.....	9,982.92	9,982.92	12,608.92	7,361.92	39,935.78
Weights and measures.....	446.70		409.75		856.45
Licenses—					
Internal revenue.....			14,650.75		14,650.75
Municipal.....			20,702.65		20,702.65
Road tax, Act 1396.....		125.00			125.00
Cart tax.....			547.50		547.50
Total revenue from taxation.....	45,164.60	45,375.12	88,597.94	10,815.73	189,953.39
Incidental revenue:					
Interest on deposits and loans.....	483.41		525.00		1,008.41
Registry of mining claims.....	4.00				4.00
Draft and transfer premiums.....	43.88				43.88
Judicial fees.....	9.00				9.00
Recorder's fees.....	24.00				24.00
Rentals.....	80.47				80.47
Fisheries.....			1,430.42	69.50	1,500.92
Cattle registration.....			5,087.00		5,087.00
Rents, profits, and privileges.....			8,966.67		8,966.67
Locust collections.....			157.50		157.50
Miscellaneous.....			1,503.25	87.00	1,590.25
Fines and penalties—					
Cedulas.....	2,046.00	3,175.00	1,187.50	740.80	7,149.30
Real-property tax.....	3,523.15	805.35	3,514.42	1.53	7,844.45
Weights and measures.....	603.10		571.00		1,174.10
Licenses, internal-revenue.....			92.50		92.50
Miscellaneous.....			5,630.57		5,630.57
Total incidental revenue.....	6,817.01	3,980.35	29,535.83	898.53	41,231.72
Other receipts:					
Vessels and launches.....	810.56				810.56
Land transportation.....	2,105.60				2,105.60
Telegraphs and telephones.....	3,504.00				3,504.00
Markets and slaughterhouses.....			13,767.17		13,767.17
Industrial operations.....			151.46		151.46
Voluntary contributions.....	15.00				15.00
Supplies brought into account.....	10,150.30				10,150.30
Aid from insular government.....	3,906.36		900.00		4,806.36
Aid from Department government.....	138,597.50	75,011.93	28,570.58		242,180.01
Aid from municipal government.....	1,860.00				1,860.00
Total other receipts.....	160,949.32	75,011.93	43,339.31		279,300.56
Total income.....	212,930.93	124,367.40	161,523.08	11,714.26	510,535.67
SUMMARY.					
Total revenue from taxation.....	45,164.60	45,375.12	88,597.94	10,815.73	189,953.39
Total incidental revenue.....	6,817.01	3,980.35	29,535.83	898.53	41,231.72
Total revenue receipts.....	51,981.61	49,355.47	118,133.77	11,714.26	231,185.11
Total other receipts.....	160,949.32	75,011.93	43,339.31		279,300.56
Total income.....	212,930.93	124,367.40	161,523.08	11,714.26	510,535.67

Comparative statement of internal revenue collections, Department of Mindanao and Sulu.

Province.	1918	1915	Increase.	
			Amount.	Per cent.
Agusan.....	P39,707.95	P16,102.47	P23,605.48	146.5
Bukidnon.....	7,535.76	2,292.59	5,243.17	228.7
Cotabato.....	39,470.01	18,431.80	21,028.71	114.0
Davao.....	209,079.62	50,105.75	158,913.87	316.7
Lanao.....	21,792.16	12,871.91	8,920.25	69.3
Sulu.....	103,923.32	44,184.04	59,739.28	135.2
Zamboanga.....	701,707.86	102,706.31	102,001.55	99.3
Total.....	626,206.68	246,754.37	379,452.31	153.7

Statement of revenue collections and other receipts, year 1918.

PROVINCE OF AGUSAN.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P6,081.50	P11,581.00	P3,583.50	P2,455.50	P23,701.50
Real-property tax—					
Current year.....	5,843.63	1,933.99	6,751.51	2,914.00	17,443.13
Previous years.....	896.64	353.06	1,060.72	538.34	2,838.76
Internal-revenue allotment.....	6,397.48	6,397.48	5,511.68	7,283.28	25,589.92
Weights and measures.....	271.75		218.25	53.50	543.50
Licenses—					
Internal revenue.....			5,000.70	67.50	5,068.20
Municipal.....			9,593.55	91.00	9,684.55
Total revenue from taxation.....	19,491.00	20,265.53	31,709.91	13,403.12	84,869.56
Incidental revenue:					
Interests on deposits and loans.....	4,802.34				4,802.34
Registry of property.....	5.60				5.60
Registry of mining claims.....	58.00				58.00
Draft and transfer premiums.....	268.09		3.30		271.39
Fisheries.....			2,908.35	76.00	2,984.35
Cattle registration.....			561.00	39.00	600.00
Rents, profits, and privileges.....			1,827.37	170.75	1,998.12
Tuition fees.....			930.00		930.00
Fines and penalties—					
Cedulas.....	1,143.75	1,770.50	549.25	594.50	4,058.00
Real-property tax.....	598.70	213.56	658.77	365.89	1,836.92
Weights and measures.....	233.50		151.75	81.75	467.00
Licenses—					
Internal revenue.....			80.00	50.00	130.00
Municipal.....			29.97		29.97
Miscellaneous.....	479.50		2,005.43	2.00	2,486.93
Total incidental revenue.....	7,589.48	1,984.06	9,705.19	1,379.89	20,658.62
Other receipts:					
Vessels and launches.....	132.82				132.82
Telegraph and telephones.....	21.60				21.60
Markets and slaughterhouses.....			1,625.31	68.30	1,693.61
Provincial hospital.....	2,252.19				2,252.19
Miscellaneous.....	1,302.05	85.32	61.86		1,449.23
Voluntary contributions.....			334.00		334.00
Transfer of funds.....	37.75			1,000.00	1,037.75
Aid from insular government.....	172,806.16	43,000.00			215,806.16
Aid from province.....			23,265.00	41,403.99	64,668.99
Total other receipts.....	176,243.73	43,085.32	25,296.17	42,472.29	287,087.51
Total income.....	203,324.21	65,334.91	66,701.27	57,255.30	392,615.69
SUMMARY.					
Total revenue from taxation.....	19,491.00	20,265.53	31,709.91	13,403.12	84,869.56
Total incidental revenues.....	7,589.48	1,984.06	9,705.19	1,379.89	20,658.62
Total revenue receipts.....	27,080.48	22,249.59	41,415.10	14,783.01	105,528.18
Other receipts.....	176,243.73	43,085.32	25,296.17	42,472.29	287,087.51
Total income.....	203,324.21	65,334.91	66,701.27	57,255.30	392,615.69

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF BUKIDNON.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas.....	P3,937.00	P7,872.00	P2,860.00	P1,077.00	P15,746.00
Real-property tax, current year.....	3,021.90	1,511.19	6,043.89	.....	10,576.98
Internal-revenue allotment.....	2,625.40	6,525.40	6,892.76	6,358.08	26,101.64
Weights and measures.....	128.35	.....	92.90	35.45	256.70
Licenses—					
Internal revenue.....	.....	.....	5.00	10.00	15.00
Municipal.....	.....	.....	199.10	137.50	336.60
Total revenue from taxation.....	13,612.65	15,908.59	15,893.65	7,608.03	53,022.92
Incidental revenue:					
Interests on deposits and loans.....	1,410.80	.....	.....	.....	1,410.80
Cattle registration.....	.....	.....	992.00	233.00	1,225.00
Rents, profits, and privileges.....	.....	.....	672.50	.....	672.50
Miscellaneous.....	721.06	763.70	128.50	.....	1,613.26
Fines and penalties—					
Cedulas.....	595.50	1,159.00	288.50	307.00	2,350.00
Real-property tax.....	76.37	88.28	152.77	.....	267.42
Weights and measures.....	317.45	.....	314.45	3.00	634.90
Licenses, internal-revenue.....	.....	.....	27.50	.....	27.50
Miscellaneous.....	.....	.....	287.90	339.00	726.90
Total incidental revenue.....	3,121.18	1,960.98	2,964.12	882.00	8,928.28
Other receipts:					
Land transportation.....	6,185.09	2,415.90	.....	.....	8,600.99
Telegraphs and telephones.....	2,126.26	.....	.....	.....	2,126.26
Toll roads and ferries.....	.....	76.76	.....	.....	76.76
Markets and slaughterhouses.....	.....	.....	174.81	17.50	192.31
Aid from insular government.....	110,433.55	48,568.29	8,500.00	.....	167,501.84
Aid from department government.....	25,900.00	.....	.....	.....	25,900.00
Aid from provincial government.....	.....	.....	16,490.00	14,700.00	31,190.00
Transfer of funds.....	.....	4,000.00	.....	.....	4,000.00
Total other receipts.....	144,543.90	55,080.95	25,154.81	14,717.50	239,497.16
Total income.....	161,277.73	72,930.52	44,012.58	23,207.53	301,428.36
SUMMARY.					
Total revenue from taxation.....	13,612.65	15,908.59	15,893.65	7,608.03	53,022.92
Total incidental revenue.....	3,121.18	1,960.98	2,964.12	882.00	8,928.28
Total revenue receipts.....	16,733.83	17,869.57	18,857.77	8,490.03	61,961.20
Total other receipts.....	144,543.90	55,080.95	25,154.81	14,717.50	239,497.16
Total income.....	161,277.73	72,930.52	44,012.58	23,207.53	301,428.36

PROVINCE OF COTABATO.

Revenue from taxation:					
Cedulas.....	P6,807.00	P13,613.00	P732.50	P6,074.50	P27,227.00
Real-property tax—					
Current year.....	2,053.20	671.85	2,806.16	591.31	6,121.52
Previous years.....	161.18	80.64	319.19	3.17	564.15
Internal-revenue allotment.....	14,708.68	14,708.68	528.64	28,708.72	58,654.72
Weights and measures.....	90.95	.....	53.65	37.30	181.90
Licenses—					
Internal-revenue.....	.....	.....	1,714.50	.....	1,714.50
Municipal.....	.....	.....	2,934.50	12.00	2,946.50
Total revenue from taxation.....	23,821.01	29,074.17	9,088.14	35,427.00	97,410.32
Incidental revenue:					
Interest on deposits and loans.....	1,553.30	.....	.....	.....	1,553.30
Registry of property.....	226.64	.....	.....	.....	226.64
Registry of mining claims.....	300.00	.....	.....	.....	300.00
Draft and transfer premiums.....	417.94	.....	.....	.....	417.94
Fisheries.....	.....	.....	226.38	120.00	346.38
Cattle registration.....	.....	.....	294.00	1,793.00	2,087.00
Rents, profits, and privileges.....	.....	.....	2,947.96	45.81	2,993.77
Rentals.....	366.49	.....	.....	.....	366.49
Miscellaneous.....	7,710.17	2,175.77	18.85	249.88	10,154.67
Fines and penalties—					
Cedulas.....	304.00	607.00	72.00	225.75	1,218.75
Real property tax.....	151.52	55.75	235.54	23.81	466.62
Weights and measures.....	96.00	.....	40.75	51.50	188.25

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF COTABATO—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Incidental revenue—Continued.					
Licenses, municipal.....			P266.56		P266.56
Miscellaneous.....	P1.04		645.16		646.20
Total incidental revenue.....	11,127.10	P2,838.52	4,748.20	P2,519.75	21,233.57
Other receipts:					
Vessels and launches.....	3,318.97	395.00			3,713.97
Telegraphs and telephones.....	2,202.10				2,202.10
Markets and slaughterhouses.....			3,544.29	1,461.62	5,005.91
Provincial hospitals.....	4,086.47				4,086.47
Toll roads.....		373.93			373.93
Miscellaneous.....	498.78	1,267.57			1,766.35
Transfer of funds.....		1,000.00			1,000.00
Aid from insular government.....	212,967.00	54,084.76	116.12	500.00	267,667.88
Aid from Department government.....	14,700.00			34,360.00	49,060.00
Aid from municipal governments.....	13,500.00	500.00			14,000.00
Total other receipts.....	251,263.32	57,621.56	3,660.41	36,321.62	348,866.91
Total income.....	286,211.43	89,534.25	17,496.75	74,268.37	467,510.80
SUMMARY.					
Total revenue from taxation.....	23,821.01	29,074.17	9,068.14	35,427.00	97,410.32
Total incidental revenue.....	11,127.10	2,838.52	4,748.20	2,519.75	21,233.57
Total revenue receipts.....	34,948.11	31,912.69	13,836.34	37,946.75	118,643.89
Total other receipts.....	251,263.32	57,621.56	3,660.41	36,321.62	348,866.91
Total income.....	286,211.43	89,534.25	17,496.75	74,268.37	467,510.80

PROVINCE OF DAVAO.

Revenue from taxation:					
Cedulas.....	P14,816.26	P29,632.50	P10,754.50	P3,813.75	P59,017.00
Real-property tax—					
Current year.....	17,531.89	5,839.24	23,272.22	5,552.28	52,195.63
Previous years.....	7,659.98	2,555.59	9,258.93	1,861.85	21,336.35
Internal-revenue allotment.....	10,117.84	10,117.84	9,496.06	5,728.20	35,459.94
Weights and measures.....	708.06		562.80	132.45	1,404.30
Licenses—					
Internal-revenue.....			10,780.00	1,392.00	12,172.00
Municipal.....			49,851.06	52.50	49,903.56
Shell fishing.....	50.00				50.00
Total revenue from taxation.....	50,885.01	48,145.17	113,975.56	18,583.08	231,588.77
Incidental revenue:					
Interest on deposits and loans.....	2,463.98				2,463.98
Registry of property.....	423.57				423.57
Draft and transfer premiums.....	438.41				438.41
Fisheries.....			1,510.64	243.05	1,753.69
Cattle registration.....			5,363.00	1,500.00	6,863.00
Rents, profits, and privileges.....			3,716.95	18.00	3,734.95
Miscellaneous.....	512.79	4,771.80	7,959.30	10.60	13,254.49
Fines and penalties—					
Cedulas.....	1,448.25	2,896.50	1,100.75	299.00	5,744.50
Real-property tax.....	770.82	267.00	814.48	344.12	2,196.42
Weights and measures.....	708.32		584.83	102.25	1,395.40
Licenses—					
Internal-revenue.....			240.00	5.00	245.00
Municipal.....			30.00		30.00
Miscellaneous.....			7,047.33	13.10	7,060.43
Total incidental revenue.....	6,766.00	7,925.30	28,376.28	2,637.12	45,694.79
Other receipts:					
Vessels and launches.....	13,499.56	471.30			13,970.86
Land transportation.....		1,324.75			1,324.75
Telegraphs and telephones.....	10,776.00				10,776.00
Markets and slaughterhouses.....			5,192.15	53.10	5,245.25
Provincial hospitals.....	528.00				528.00
Cemetery collections.....			747.20		747.20
Voluntary contributions.....	3,108.50				3,108.50
Miscellaneous.....	580.15	96.50			676.65

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF DAVAO—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Other receipts—Continued.....					
Aid from insular government.....	P216,256.77	P75,744.31			P292,001.08
Aid from Department government.....	21,500.00				21,500.00
Aid from provincial government.....			P17,150.00	P21,350.00	38,500.00
Aid from municipal government.....	9,600.00				9,600.00
Total other receipts.....	275,848.98	77,636.86	23,089.35	21,403.10	397,978.29
Total income.....	333,500.08	133,707.33	165,441.19	42,563.25	675,211.85
SUMMARY.					
Total revenue from taxation.....	50,885.01	48,145.17	113,975.56	18,533.03	231,538.77
Total incidental revenue.....	6,766.09	7,925.30	28,376.28	2,627.12	45,694.79
Total revenue receipts.....	57,651.10	56,070.47	142,351.84	21,160.15	277,235.56
Total other receipts.....	275,848.98	77,636.86	23,089.35	21,403.10	397,978.29
Total income.....	333,500.08	133,707.33	165,441.19	42,563.25	675,211.85

PROVINCE OF LANAO.

Revenue from taxation:					
Cedulas.....	P9,127.00	P18,217.00	P9,127.00	(1)	P36,471.00
Real-property tax—					
Current year.....	1,769.10	589.70	2,941.90	(1)	5,300.70
Previous years.....	135.24	44.99	231.54	(1)	411.77
Internal-revenue allotment.....	8,239.04	8,239.04	16,478.12	(1)	32,956.20
Weights and measures.....	80.85		55.85	(1)	136.70
Licenses—					
Internal-revenue.....			1,254.25	(1)	1,254.25
Municipal.....			3,736.75	(1)	3,736.75
Total revenue from taxation.....	19,351.23	27,090.73	33,825.41	(1)	80,267.42
Incidental revenue:					
Interest on deposits and loans.....	3,624.72			(1)	3,624.72
Registry of property.....	12.00			(1)	12.00
Draft and transfer premiums.....	15.35			(1)	15.35
Rentals.....	4,907.39			(1)	4,907.39
Fisheries.....			1,468.80	(1)	1,468.80
Cattle registration.....			2,452.00	(1)	2,452.00
Rents, profits, and privileges.....			2,786.03	(1)	2,786.03
Tuition fees.....			604.00	(1)	604.00
Miscellaneous.....	1,331.35	1.50	295.33	(1)	1,628.18
Fines and penalties—					
Cedulas.....	1,071.50	2,106.00	1,071.50	(1)	4,249.00
Real-property tax.....	202.80	67.57	338.26	(1)	608.63
Weights and measures.....	16.00		41.00	(1)	57.00
Licenses, internal-revenue.....			.25	(1)	.25
Miscellaneous.....			2,029.63	(1)	2,029.63
Total incidental revenue.....	11,181.11	2,175.07	11,086.80	(1)	24,442.98
Other receipts:					
Vessels and launches.....	4,721.65			(1)	4,721.65
Land transportation.....	5,320.23			(1)	5,320.23
Telegraphs and telephones.....	4,005.88			(1)	4,005.88
Markets and slaughterhouses.....			4,935.11	(1)	4,935.11
Provincial hospitals.....	3,476.48			(1)	3,476.48
Laboratories.....	1,186.57			(1)	1,186.57
Voluntary contributions.....			2.50	(1)	2.50
Ice plant.....	668.43			(1)	668.43
Provincial shop.....	93.20			(1)	93.20
Waterworks.....	684.11			(1)	684.11
Miscellaneous.....	914.34	65,437.07		(1)	914.34
Aid from insular government.....	182,763.05		54,506.00	(1)	302,765.12
Aid from Department government.....	10,700.00			(1)	10,700.00
Aid from municipal government.....	4,500.00			(1)	4,500.00
Total other receipts.....	219,034.94	65,437.07	59,442.61	(1)	343,914.62
Total income.....	249,567.28	94,702.87	104,354.82	(1)	448,624.97

1 Included in municipal fund.

Statement of revenue collections and other receipts, year 1918—Continued.

PROVINCE OF LANAŌ—Continued.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
SUMMARY.					
Total revenue from taxation	P19,351.23	P27,090.73	P23,825.41	(1)	P80,267.37
Total incidental revenue	11,181.11	2,175.07	11,086.80	(1)	24,442.98
Total revenue receipts	30,532.34	29,265.80	44,912.21	(1)	104,710.35
Total other receipts	219,034.94	65,437.07	59,442.61	(1)	343,914.62
Total income	249,567.28	94,702.87	104,354.82	(1)	448,624.97

PROVINCE OF SULU.

Revenue from taxation:					
Cedulas	P13,170.00	P26,150.00	P1,051.50	P12,023.50	P52,395.00
Real-property tax—					
Current year	2,192.01	678.37	3,437.54	124.35	6,432.27
Previous years	198.86	130.78	283.03	151.34	769.01
Internal-revenue allotment	12,061.36	12,061.36	811.98	11,640.04	36,514.74
Weights and measures	218.60		182.00	36.60	437.20
Licenses—					
Internal-revenue			3,514.75		3,514.75
Municipal			12,019.00	677.00	12,696.00
Shell-fishing, Act 2604	2,780.00				2,780.00
Sponge fishing				62.10	62.10
Total revenue from taxation	30,640.83	39,040.51	21,304.80	24,614.93	115,601.07
Incidental revenue:					
Interest on deposits and loans	181.23				181.23
Registry of property	342.22				342.22
Draft and transfer premiums	277.46				277.46
Rentals	3,889.44				3,889.44
Fisheries			7.50	527.50	535.00
Cattle registration			823.00	8,133.00	8,956.00
Rents, profits, and privileges			4,159.44		4,159.44
Miscellaneous	10,475.80	1,103.23	6,886.71	3,857.35	22,323.09
Fines and penalties—					
Cedulas	1,747.25	3,589.00	131.25	1,663.25	7,133.75
Real-property tax	141.63	48.30	207.87	26.67	424.47
Weights and measures	79.35		66.35	13.00	158.70
Shell-fishing, Act 2604	25.00				25.00
Miscellaneous			116.10	845.58	961.68
Total incidental revenue	17,159.38	4,740.53	12,398.22	15,066.35	49,364.48
Other receipts:					
Vessels and launches	32,231.60				32,231.60
Land transportation	3,351.03	5,089.25			8,440.28
Telegraphs and telephones	4,543.36				4,543.36
Waterworks, Jolo			3,758.63		3,758.63
Markets and slaughterhouses			19,450.04	9,845.22	29,295.26
Provincial hospitals	7,509.52				7,509.52
Provincial shop	897.72				897.72
Miscellaneous	230.42				230.42
Aid from insular government	154,652.50	60,000.00		56,310.00	270,962.50
Aid from Department government	60,305.00	25,000.00			85,305.00
Aid from municipalities	35,419.79		11,000.00		46,419.79
Transfer of funds	1,605.59		5,774.95		7,380.54
Total other receipts	300,746.53	90,089.25	39,983.62	66,155.22	496,974.62
Total income	348,546.74	133,870.29	73,686.64	105,836.50	661,940.17
SUMMARY.					
Total revenue from taxation	30,640.83	39,040.51	21,304.80	24,614.93	115,601.07
Total incidental revenue	17,159.38	4,740.53	12,398.22	15,066.35	49,364.48
Total revenue receipts	47,800.21	43,781.04	33,703.02	39,681.28	164,965.55
Total other receipts	300,746.53	90,089.25	39,983.62	66,155.22	496,974.62
Total income	348,546.74	133,870.29	73,686.64	105,836.50	661,940.17

1 Included in municipal fund.

Statement of revenue collections and other receipts, year 1918—Continued

PROVINCE OF ZAMBOANGA.

Accounts.	General fund.	Road and bridge fund.	Municipal fund.	Municipal district fund.	Total.
Revenue from taxation:					
Cedulas	P18,305.25	P35,782.50	P11,665.00	P6,566.25	P72,319.00
Real-property tax—					
Current year	29,017.13	9,677.42	47,260.90	1,127.25	87,082.70
Previous years	6,016.17	2,102.40	9,144.52	129.09	17,392.18
Internal-revenue allotment	13,154.20	13,154.20	19,327.72	8,641.52	54,277.64
Weights and measures	531.05		491.90	39.15	1,062.10
Licenses—					
Internal-revenue			15,583.75	65.00	15,648.75
Municipal			31,995.15	374.00	32,369.15
Sponge fishing	86.25		86.25		172.50
Shell fishing	835.00				835.00
Total revenue from taxation	67,945.05	60,716.52	135,525.19	16,942.26	281,129.02
Incidental revenue:					
Interest on deposits and loans	3,804.79				3,804.79
Registry of property	6,153.79				6,153.79
Draft and transfer premiums	388.60				388.60
Recorder's fees	107.00				107.00
Fisheries			2,011.61	576.68	2,588.29
Cattle registration			4,332.00	4,062.00	8,394.00
Rents, profits, and privileges			8,666.26	34.86	8,701.12
Miscellaneous	10,217.01		1,713.59	788.76	12,719.36
Fines and penalties—					
Cedulas	4,412.75	8,112.50	2,609.75	1,817.00	16,952.00
Real-property tax	2,236.76	770.44	3,475.92	64.64	6,547.77
Weights and measures	849.80		806.35	8.75	1,664.90
Licenses, internal-revenue			631.15	3.75	634.90
Miscellaneous	4.31		6,155.95	458.74	6,619.00
Total incidental revenue	27,679.81	8,882.94	29,901.59	7,880.83	74,345.23
Other receipts:					
Vessels and launches	6,190.16				6,190.16
Land transportation	3,350.00				3,350.00
Telegraphs and telephones	18,274.42				18,274.42
Markets and slaughterhouses			27,863.40	755.97	28,619.37
Waterworks			9,282.88		9,282.88
Provincial hospitals	5,772.37				5,772.37
Voluntary contributions			4,779.85		4,779.85
Miscellaneous	1,066.83	1.62			1,068.45
Aid from insular government	138,594.79	77,510.82	3,488.75		219,594.36
Aid from Department government	431,632.04	985.00			432,617.04
Aid from provincial government				46,319.61	46,319.61
Aid from municipal government	9,972.46				9,972.46
Total other receipts	614,843.07	78,497.44	45,414.88	47,075.58	786,830.97
Total income	710,467.93	148,096.90	210,841.66	71,898.67	1,141,305.22
SUMMARY.					
Total revenue from taxation	67,945.05	60,716.52	135,525.19	16,942.26	281,129.02
Total incidental revenue	27,679.81	8,882.94	29,901.59	7,880.83	74,345.23
Total revenue receipts	95,624.86	69,599.46	165,426.78	24,823.09	355,474.25
Total other receipts	614,843.07	78,497.44	45,414.88	47,075.58	786,830.97
Total income	710,467.93	148,096.90	210,841.66	71,898.67	1,141,305.22

PUBLIC ORDER.

The year 1918 has been a year that proved the success of public-order maintenance in Mindanao-Sulu. With the withdrawal of the military in the last month of 1917, breaking up the garrisons at Ludlow Barracks, Parang, Cotabato (two battalions); Augur Barracks at Asturias, Jolo, Sulu (two battalions), and Camps Keithley and Overton, Lanao (two battalions), leaving only one battalion at Pettit Barracks, Zamboanga, the maintenance of public order has been left entirely in the hands of the constabulary, and within their respective sphere of action of the local peace officers. The trial has given happy results and has demonstrated that the constabulary is an organization entirely capable of controlling the situation and imposing a government of law and order.

However, the fact should not be lost sight of that, as a fruit of the policy of persuasion worked out happily some years ago, there is now observed among Mohammedans and pagans a clear idea of government and greater respect of law and love of peace and order. This fact is fundamental in the matter of public order.

Of the principal events which have been registered during the year may be mentioned the following:

Agusan.—On October 23, 1918, a patrol of constabulary soldiers, under Lieut. Roska, killed Bagani Mambuanag and a number of his people, capturing many important members of his band and one carbine in good condition. Mambuanag was a chief of a group of bandits who had been, during the first months of 1918, raiding the inhabitants of Alto Maasam, Adgawan, and Umayam, killing some people in said places. With his death the region of Umayam has been cleaned of powerful bandit chiefs.

Bukidnon.—Toward the month of August, 1918, there was formed in Dagumbaan and Kulaman, Bukidnon, a band of fanatics headed by one Datu Inda, who has succeeded in winning a fame as a messenger from heaven, enabling him in this manner to gather about 200 fanatic persons in the neighborhood and were holding continuous gatherings in Dagumbaan, at times robbing cattle to feed the band. Although the gatherings were peaceful, they, however, assumed such increment that they could in a certain way place in danger the preservation of public order. For this reason the authorities of Bukidnon took action against the band, and under the command of Capt. Padua and Lieut. Gaviola of the constabulary, they succeeded in capturing Inda and dispersing the band about the middle of the said month of August.

Davao.—On January 3, 1918, a constabulary corporal named Mohamad, during an attack of madness killed the wife of Sergt. Ibalio, nine Japanese, two Chinese, and one Filipino, and wounded some others. Two days later he was killed by a constabulary detachment.

In February, 1918, 12 members of one family of Mansacas were killed by a group of bandits of the same tribe under Glansay and Calumpang. Some days later the constabulary succeeded in killing five of these bandits, but the rest had escaped. This killing of Mansacas is a manifestation of the sentiments of vengeance which is sometimes registered in remote regions like the interior of Mindanao.

On February 15 Lieut. Ilustre arrested for illegal entry to Davao five Japanese who arrived at Mati on a schooner.

On October 3, 1918, a Moro named Damiano Daya killed near the constabulary headquarters two women and one small girl, but was killed on the spot by the constabulary.

Lanao.—On the night of February 5 two Moro constabulary soldiers deserted their company and carried away with them six Krag, with a hundred rounds of ammunition. These deserters, with Datu Tumanong and his relatives, formed a small band in Munal. The band has now been destroyed and the rifles recovered, Deputy Gov. Makarimbang, of Ganassi, and Datu Minor, of Munal, having taken very active and important part in the cleaning out of this band.

Sulu.—On March 12 five Salips and eight companions went to the dock of Kagayan de Sulu and when required to hand in their arms they refused, and thereupon a fight ensued between the bandits and the government authorities, the latter being headed by Deputy Gov. Guy Strattan, and as a consequence thereof four Salips died and the rest escaped. Three of whom later on have been captured by the constabulary.

Sampang and his brother Juafni and five companions refused to obey the sentence imposed upon them by the court of first instance of Sulu in April, 1918, and as a consequence of this refusal they ran away into the forest and there formed an armed band with the object of offering resistance against the forces of the government. As a result of this, there sprang up a difficult situation in Jolo. There arose the necessity of increasing with two more companies the constabulary forces, to assure the successful result of operations. Kassim, companion of Sampang, formed another band which operated in Talipau, and this band was the one that killed Mariano Garcia and a Chinese in Tulay, Jolo. Unaid also formed another band in Silangkan, although this band had no direct intelligence with that of Sampang. Said band at Silangkan was the one that attacked Tanjung and there killed the foreman of Sandy Schuck, bringing away with them his shotgun. The campaign lasted three months and a half (June, July, August, and September), during which there have taken place encounters between the constabulary and the bandits, which resulted, up to the 1st of

August, 1918. in the elimination of 49 bandits, 31 of whom were killed and 18 captured.

After the 1st of August Kassim Salip Bal and one companion, who were the leaders of the Talpau band, were killed. By means of a well-laid out plan, in which the provincial authorities, the constabulary of Jolo, Panglima Unga, Col. Waloe, and the undersigned took part, the surrender of Sampang, his brother Juaini, and five companions, who are now suffering imprisonment in San Ramon, has been effected. A detailed report on this matter has been opportunely submitted.

On February 21 Lieut. Ventura, upon arresting five Moro gamblers in the island of Siasi, was killed by these Moros, and Pvts. Severino Urban and Silvestre Galan were seriously wounded.

On July 17 five Moros of the island of Lugus, Siasi, forming a small band under the command of one schoolboy named Ismula, had an encounter with the constabulary, and as a result of which Corpl. Bucao has been wounded and his Krag taken away by the bandits who later on had united with Unaid at Silangkan. These bandits, however, have been later on (August, 1918) captured and the carbine recovered.

On the same island of Lugus a band composed of four Moros attacked at daybreak of September 25 a small constabulary patrol and killed Lieut. La Roche and Sergt. Pedro Gragasín and seriously wounded Pvts. Dalmacio Escabarto and Crispulo Eiores. The four Moros have been killed. Angang, companion of these four Moros, who succeeded in escaping during the affray from the place where he was held as prisoner by the soldiers, surrendered on November 18, 1918, to the constabulary at Siasi.

On December 12 Panglima Indanan was captured for possessing opium and he is, up to the present, in Zamboanga under bail, waiting the hearing of his case before the court of first instance of Sulu.

Zamboanga.—On June 13, 1918, a Moro named Karamang, by reason of family trouble and suffering from an attack of acute madness, killed three persons and wounded five at the Zamboanga market. He was killed at store No. 34, of Calle Magay, Zamboanga.

On July 23, 1918, Marcelino Basan and Bernabe Kamapili, while hunting in the island of Basilan, were attacked and killed by two Moros named Awalul and Lahl. A constabulary force under Capt. Misa conducted a campaign against them and killed Lahl some time later. Awalul succeeded in escaping and his whereabouts is still unknown. As a result of these expeditions it has been discovered that in the island of Caulunga, southeast of Basilan, there were Moros who, upon being required to surrender their arms illegally possessed by them, offered resistance and attacked the soldiers. In view of this act, Capt. Misa, with Lieut. Dumlao and 20 soldiers, in company with Datu Cuevas, had an encounter on September 27, 1918, with these rebellious Moros, and as a result of which a constabulary soldier was wounded and seven Moros killed.

These were the principal events during the year. There have been other crimes and events, but they were not of such importance as to deserve mention in this report.

JUSTICE.

Justice in the Department of Mindanao and Sulu is administered under the jurisdiction of the following judicial districts: The twenty-fourth judicial district, comprising the Provinces of Surigao and Agusan; the twenty-fifth, comprising Misamis, Bukidnon, and Lanao; and the twenty-sixth, comprising Zamboanga, Sulu, Davao, and Cotabato. Over each of these districts presides a judge of the court of first instance, with the exception of the twenty-sixth judicial district, which has a permanent judge and an auxiliary judge. The tragic death of Judge Reyes by the wreck of the Steamship *Quantico*, on December 25, 1918, has created a great gap in the administration of justice in the department, and the vacancy is still unfilled, but it is being temporarily occupied by the Hon. Francisco Soriano, auxiliary judge, who is holding sessions in his district.

In each capital of the seven Provinces in the Department a justice of the peace is appointed. He must be a lawyer, but is not allowed to engage in private practice. Governors of the Provinces are also justices of the peace in the territories inhabited by Mohammedans and pagans, and deputy governors perform the duties of ex officio auxiliary justice of the peace in the same regions. Under Act No. 2664 municipal district presidents perform the duties and exer-

cise the powers of justices of the peace in cases involving violation of ordinances and in the absence of the justice of the peace proper. The procedure followed in other organized municipalities in requiring justices of the peace to pass the prescribed examination before appointed to office is observed throughout the Department in municipalities other than provincial capitals.

Arrangements have been made empowering the assistant attorneys of Lanao and Sulu to act as ex officio register of deeds, and which duties should be performed by the justices of the peace in the capitals of the Provinces of Cotabato and Davao, as they are now in Bukidnon and Agusan. In this case the justices of the peace should be paid, aside from their regular monthly salary, an additional compensation of ₱25. In Zamboanga this position will be under the control of the Department attorney, who at present exercises supervision over all matters relating to the registration of deeds throughout the Department.

The provisions of the Penal Code, the Civil Code, etc., applicable in other Provinces of the Islands, are also in force in the Department of Mindanao and Sulu, with the exception of those established by Act No. 2520, which authorize the courts to decide cases when the parties involved are Mohammedans or pagans, in accordance with their laws or customs recognized in the locality.

During the year 1918, 541 criminal cases have been registered in the court of first instance, as against 550 in 1917, and 67 land-registration cases, as against 54 in 1917. The total collection of fees by registers of deeds amounted to ₱4,399.08, as against ₱480.20 in 1917.

There is at present felt the lack of legislation regarding the marriages between the Mohammedans in this Department. The Supreme Court of the Philippine Islands in the case of the United States v. Tubban (13 Off. Gaz., p. 426), said:

"We are not advised of any provision of law which recognizes as legal a tribal marriage of so-called non-Christians or members of uncivilized tribes celebrated within the Province without compliance with the requisites prescribed by General Orders No. 68."

In view of the above decision of the supreme court, it is very hard for the offended parties in this department to institute prosecutions for adultery committed by the Mohammedans or non-Christians, who have been married in accordance with their own customs only and not in accordance with the provisions contained in General Orders, No. 68, above mentioned. It is, therefore, suggested that a law be enacted prescribing the conditions and requisites in which such marriages may be regarded as valid before the law. The only objection that may be offered against this recommendation is that a legislation of this kind may affect the political objective by serving as an obstruction in the desired amalgamation and union. I have been thinking of this important question, but present circumstances point to the wisdom of adopting these remedies. However, at the end of 10 years more I feel assured that the present problems which have arisen from the observance of the customs, laws, and rites of the Mohammedans will have been lessened in such a way that no difficulty will be encountered in submitting them to the same general legislation in force throughout the Philippine Islands.

Another deficiency noted is that the Administrative Code had repealed Act No. 2409 which gave the justices of the peace of the capitals in the Department the same powers as those of the northern Provinces. The judges of the twenty-sixth judicial district reside in Zamboanga, and only on certain occasions they go to Provinces to hold the ordinary terms of court. Generally, cases arise wherein the judges of the courts of first instance will have to approve bonds or issue injunctions, writs of habeas corpus, prohibitions, etc., and there being no judge of the court of first instance in the capital of the Province it is very hard for the people to get the necessary relief to which they are entitled. I would, therefore, also suggest that a law be enacted by the legislature authorizing the justices of the peace of the capitals here to have jurisdiction over peremptory matters and cases such as enumerated above in the absence of the judges of the courts of first instance.

Before concluding this subject-matter, I wish to mention the fact that the creation of a judicial district in Davao has again been discussed. Judge Reyes was in favor of the idea, but by reason of the existence of a large number of cases in Sulu, he has proposed the consolidation into a district of Davao and that Province instead of Cotabato. This division will create difficulties in communication, and should the organization be carried out, I recommend that Cotabato be consolidated with Davao instead of Jolo and Zamboanga with Jolo and Dapi-

tan. There will be enough work for the judge of Davao in those two Provinces and on the Pacific coast, where by reason of distance many cases have not been brought to court and where court sessions should be held during the months of the South Monsoon.

PUBLIC HEALTH.

The public health has been duly attended to during the year. There exist in the whole Department the following hospitals: General Hospital, Zamboanga; Rizal Memorial Hospital, Dapitan; and the provincial hospitals of Jolo, Cotabato, Lanao, and Agusan. Besides the Government hospitals there exist two private ones in Zamboanga, one that of the Episcopal Church Mission, which is the Zamboanga Hospital, and the other that of the bishop of the Roman Catholic Church, which is the "Hospital Pilar." In Davao a hospital operated by the Congregational Mission also exists. Moreover, the Government has established dispensaries in Bukidnon, Cotabato, and other Provinces in the Department. During the year 2,635 cases have been admitted to hospitals, 49,348 cases and 154,381 treatments have been registered, and 7,484 examinations have been made in the dispensary laboratories. The Zamboanga General Hospital was inaugurated in September, 1918. It is composed of several substantial buildings of modern construction. A new hospital in Butuan, Agusan, is now under construction.

During the year cholera cases have been registered in Lanao, Jolo, and Zamboanga; smallpox in Cotabato, Davao, Lanao, Sulu, and Zamboanga; "influenza" in all Provinces, but Dapitan and Agusan have suffered the most. Many malaria cases have also been registered in Davao, Agusan, and among the new colonists in Lamitan.

The following table demonstrates cases of contagious diseases occurring during the year, which was prepared in the office of the chief, Division of Mindanao and Sulu, Philippine health service. Other data regarding public health can be found in the report of the same chief.

Dangerous communicable diseases registered during the year.

Diseases.	Agusan.		Bukidnon.		Cotabato.		Davao.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Smallpox.....					6,621	461	2,140	372
Varicoid.....					1,004	56	53	1
Varicella.....	4				1,114	24	108	8
Measles.....							11	
Typhoid.....							19	5
Dysentery.....							57	11
Influenza.....	17,234	308	622	47	4,904	154	1,791	86
Tuberculosis.....					19		15	4
Total.....	17,238	308	622	47	13,562	695	4,194	487

Diseases.	Lanao.		Sulu.		Zamboanga.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cholera.....	78	41			150	110	228	151
Smallpox.....	2,700	164	2	1	308	64	11,771	1,002
Varicoid.....			3		5		1,065	57
Varicella.....	28		50		28	1	1,332	33
Measles.....			6				17	
Typhoid.....	8	2	1		7	6	35	13
Dysentery.....	53	3	11				121	14
Mumps.....			2				2	
Leprosy.....	10		3	1			13	1
Influenza.....	22	1	1,403	13	65	16	25,941	635
Tuberculosis.....	39	5	4		34	34	111	43
Total.....	2,938	216	1,485	15	597	231	40,636	1,900

PUBLIC INSTRUCTION.

In the whole Department there are 30 American teachers, of whom the Department superintendent of schools and seven division superintendents are included. There are 785 Filipino teachers. The tables which are hereto attached demonstrate the number and kind of schools, attendance therein, and all data which are necessary in order to give a clear idea of the activities in this branch of public service in Mindanao-Sulu. Toward the middle part of the year 1918, Department Supt. Mr. Glenn W. Caulkins was relieved by Mr. Carl M. Moore, who, imbued with the same profound interest as that taken by his predecessor, is undertaking with deep interest in uplifting the educative work in Mindanao. The difficulties to be encountered are great in these regions. Almost all of the personnel have to be brought down from the north, who with meager salary and with the thought of living in remote and dangerous regions, do not feel inclined to come down to Mindanao. There is yet to add, the lack of communication, opposition on the part of some elements, especially Mohammedans, in sending their children to schools, and other hardships which are numerous, making thereby the conditions unpleasant for teachers in many districts, creating thereby difficulties in the proper selection of a good personnel. However, Department Supt. Mr. Moore is overcoming these difficulties and has accomplished during the year a creditable work in this branch of service.

The undersigned has issued an executive order making attendance at schools compulsory for boys and girls from 7 to 13 years of age and who live within 2 kilometers distance from the schools. In order that indifferent fathers can not escape from this rule or refuse to comply with the provisions, the Executive Order No. 1 has also been issued prohibiting the changing of residence without previous permission from their respective provincial governors. As a result of this procedure there has been noted an increase in attendance of from 4,924 in December, 1917, to 8,423 in December, 1918. The enrollment of Moro girls has also increased from 331 in December, 1917, to 724 in December, 1918. (Memorandum of department superintendent of schools.)

This compulsory measure is going on but with much care on the part of proper authorities so as not to cause any trouble. The old men and panditas believe that through education, especially for women, their customs and prescriptions of their religion will be broken. In this connection protests have been filed by Moro representatives with a view of amending this measure, but instructions to strictly follow the provisions of the order are left in the hands of local officials to comply with. The undersigned is firmly convinced that education is one of the principal ways upon which our social regeneration depends, but this kind of instruction will not be complete without including the teaching of Mohammedan girls. They, who are to be the future mothers, should know better than men in molding and uplifting our future citizens. In view thereof compulsory attendance in schools for girls has been extended to them.

During my inspection trip in the first days of March in Jolo I had the greatest satisfaction in seeing the result of the campaign for the girls' attendance in schools. In the school at South Ubian there are at present 123 girls and 147 boys. A new building capable of accommodating 200 pupils more is now needed there. In the school at Simonol there are 123 boys and 83 girls; 54 boys and 45 girls in Manuc Manca; and 33 boys in Sitangkai, but in this last one all girls will enroll next June, according to the president of the district. This attendance on the part of girls only commenced two months ago. Before in the Tawi-Tawi district there was none. Also in Cotabato, Lanao, and in different places in Zamboanga, this increase in number of girls in schools has been registered. In general, the campaign in this connection has resulted entirely satisfactorily.

Although many schools have been established in the Department, yet there are still many regions not being afforded with this opportunity, as the Sarangani Valley, the regions between Cotabato and Davao, Bukidnon and Lanao, in the interior part of Zamboanga Peninsula, and southern regions of Basilan Island, where schools should be established. It is necessary that school buildings of permanent construction be erected because they are not only very economical, but also will attract people and give important credit to education, thereby the desired objective shall be soon attained. The development of agricultural schools in which field work is taught to boys is also very necessary in Mindanao-Sulu. For the majority of the masses who can not ordinarily afford to send their sons to capitals in order to acquire higher education, this kind of inferior studies, although practical, will answer the

purpose and can be applied to any necessities of life whereby the interested party can get along all right. The old Mohammedan people have an erroneous idea that the school is good only if those who are educated in the same could be immediately employed in public service. For them the ideal of an education is that the interested can take part afterward in public affairs, but this belief will soon disappear with the old generation when the boys of the new generation who receive education under the present system will appreciate the immense benefits to come.

It is also important that constant inducement be given the personnel to better their condition in all that can be done. The teacher in Mindanao-Sulu is a true missionary who is possibly taking the bitterest part of Government constructive labor. Only in this manner could good men be obtained who, besides being good teachers, have enough experience to exert moral influence in the community where they live.

The following tables demonstrate the necessary data in this branch of Government activity during the year 1918:

TABLE No. I.—*Number of schools.*

Kind of schools.	December.	
	1917	1918
Regular primary schools.....	179	197
Settlement farm schools, primary grades.....	96	106
Agricultural schools.....	8	10
Intermediate schools.....	7	14
Trade schools.....	1	1
Secondary schools.....	1	1
Total.....	292	372

TABLE No. II.—*Annual enrollment by nationalities.*

Province.	Dec. 31.										Total increase.
	Christian.		Mohammedan.		Pagan.		Others.		Total.		
	1917	1918	1917	1918	1917	1918	1917	1918	1917	1918	
Agusan.....	3,119	2,965		22	1,624	2,696	16	26	4,759	4,759	90
Bukidnon.....	67	159	24	22	2,861	4,504			2,952	4,685	1,732
Cotabato.....	1,018	1,049	919	1,542	116	108	10	52	2,063	2,751	688
Davao.....	2,242	2,760	643	770	2,156	1,995	48	19	5,069	5,544	475
Lanao.....	1,075	1,148	779	2,069	18	20	2	5	1,874	3,242	1,368
Sulu.....	379	354	1,734	2,968			98	96	2,211	3,408	1,197
Zamboanga.....	4,311	5,036	825	1,064	1,067	1,006	26	18	6,219	7,114	895
Total.....	12,211	13,491	4,924	8,423	7,832	10,329	200	195	25,167	32,438	7,271

TABLE No. III.—*Number of teachers.*

Kind of teachers.	December.	
	1917	1918
Americans.....	20	27
Filipinos:		
Provincial.....	76	24
Municipal district.....	290	446
Municipal.....	227	29
Total Filipinos.....	593	759
Grand total.....	613	786

TABLE No. IV.—*Agricultural work.*

Province.	Number of agricultural and settlement farm schools.	Total value of products harvested, 1918.
Agusan.....	32*	P12,397.97
Bukidnon.....	52	32,266.21
Cotabato.....	14	7,295.47
Davao.....	34	27,874.98
Lanao.....	10	4,753.26
Sulu.....	1	1,065.00
Zamboanga.....	35	1,983.54
Total.....	178	87,641.43

TABLE No. V.—*School and home gardens.*

Province.	Number of schools with gardens.	Number of pupils taking gardening.	Number of plots in school gardens.	Number of plots in home gardens.	Total value of vegetables harvested.
Agusan.....	14	386	622	58	P1,014.17
Bukidnon.....	14	886	2,376	586	562.81
Cotabato.....	28	605	1,594	1,373	4,736.22
Davao.....	26	735	1,076	3,431	2,169.22
Lanao.....	23	747	958	214	1,136.60
Sulu.....	16	1,250	2,541	9,163	1,037.49
Zamboanga.....					
Total.....	121	4,609	9,167	14,825	10,696.51

TABLE No. VI.—*Government scholarships.*

Schools attended.	Home Province.							Total.
	Agusan.	Bukidnon.	Cotabato.	Davao.	Lanao.	Sulu.	Zamboanga.	
College of Engineering, University of the Philippines.							1	1
College of Agriculture, University of the Philippines, Los Baños.			1		1		3	5
College of Education, University of the Philippines.						1		1
Philippine Normal School.						1	1	2
Manila High School.					1		1	2
Zamboanga High School.	2		4	4	5	5	3	23
Central Luzon Agricultural School, Muñoz.	2		5			3		10
Zamboanga primary schools.			3		2		5	10
Jolo primary schools.					2			2
Total.....	4		13	4	11	10	14	56

TABLE No. VII.—*School libraries.*

Province.	Number of school libraries.	Number of books and pamphlets.	Subscriptions to magazines and periodicals.	Number of persons using libraries.
Agusan.....	6	570	18	618
Bukidnon.....	1	63		100
Cotabato.....	1	225	3	153
Davao.....	1	169	6	77
Lanao.....	2	310	6	138
Sulu.....	2	263	21	162
Zamboanga.....	1	1,248	11	314
Total.....	14	2,848	65	1,562

TABLE NO. VIII.—*The epidemic of Spanish influenza (trancazo).*

Province.	Number attacked.		Number of deaths.		Number of schools closed.
	Teachers.	Pupils.	Teachers.	Pupils.	
Agusan.....	76	3,640	2	90	42
Bukidnon.....	41	2,734	.....	44	29
Cotabato.....	55	1,861	.....	18	7
Davao.....	38	1,576	.....	102	13
Lanao.....	29	910	.....	37	.....
Sulu.....	51	1,403	1	.....	2
Zamboanga.....	107	3,416	1	2	3
Total.....	397	15,540	4	293	85

TABLE NO. IX.—*Authorized construction of school buildings.*

Project.	Amount of insular aid.
Zamboanga normal school building, Zamboanga.....	P200,000.00
Mailag agricultural school building, Bukidnon.....	30,000.00
Agusan agricultural school building, Agusan.....	30,000.00
Lapak agricultural school dormitory, Sulu.....	25,000.00
Zamboanga trade school building, Zamboanga.....	25,000.00
Dansalan central school building, Lanao.....	25,000.00
Mampising agricultural school, Davao.....	20,000.00
Zamboanga domestic science building, Zamboanga.....	19,376.00
Dipolog central school building, Zamboanga.....	15,000.00
Cotabato girls' dormitory, Cotabato.....	15,000.00
Davao central school building, Davao.....	15,000.00
Siasi barrio school building, Sulu.....	15,000.00
Balakatan agricultural school building, Zamboanga.....	15,000.00
Piang agricultural school academic building, Cotabato.....	12,000.00
Piang agricultural school dormitory, Cotabato.....	10,000.00
Baganga central school building.....	10,000.00
Maimbung barrio school building, Sulu.....	10,000.00
Esperanza and Bunaguit settlement farm school buildings, Agusan.....	6,000.00
Lanao barrio school building, Lanao.....	5,000.00
Cotabato barrio school buildings, Cotabato.....	5,000.00
Lanao settlement farm school buildings, Lanao.....	5,000.00
Maimbung barrio school building, Sulu.....	5,000.00
Completion of school buildings under construction in Sulu.....	5,430.00
Linabo settlement farm school building, Bukidnon.....	5,000.00
Impasugong settlement farm school building, Bukidnon.....	5,000.00
Lumbatan agricultural school building, Lanao.....	4,500.00
Kidapawam dormitory buildings, Cotabato.....	3,000.00
Total.....	600,300.00

PRISONS.

There has been no material change during the year to be given under this title. No new prison houses have been constructed, although in Davao certain important improvements have been made on the premises of the building which served as provincial jail. Provincial jails are directly under the control and responsibility of the provincial governor, who appoints the warden and the necessary guards, and the municipal jails are under the control and responsibility of the President, who supervises them through the municipal police. The regulation observed in said jails is the same as that promulgated by the bureau of prisons in Manila. The prison guards wear the prescribed uniform and receive from P20 to P30, while the wardens from P60 to P80 monthly. Prisoners also wear the prescribed uniform, the value of their food fluctuating from 20 to 30 centavos daily. Insular prisoners of the seven Provinces in the Department are sent to the San Ramon penal farm, which serves here, as does the Bilibid prison in Manila, for the northern Provinces. On January 1, 1915, San Ramon penal farm became an insular institution by executive order of the Governor General.

As an experimental system the Province of Zamboanga sends its provincial prisoners of good conduct to the agricultural colony at Lamitan, where, under the responsibility and direction of a superintendent, they devote themselves

to agricultural work, especially in the nurseries, which are utilized as a distribution center of seeds in the locality. The experiment, however, has not as yet produced good results owing to the negligence of Supt. Blanca, who has disastrously administered the colony, and the provincial governor was obliged to take action against him by separating him from the public service.

PUBLIC WORKS.

There has been spent approximately ₱360,000 on public works under the supervision of the supervising engineer's office in the Department during the year 1918. The only balance remaining at the end of the year is that on building projects now under way. Considerable survey work has been accomplished during the year. The Bolong-Curuan section of the east coast road and the Isabela-Lamitan Road have both been surveyed and located. Irrigation projects have been investigated and preliminary data and reports furnished the director of public works.

During the year 1918 there have been several changes made in the personnel of the bureau of public works within the Department. Mr. Newton has been appointed as assistant in the central office at Zamboanga. In Jolo, Cotabato, Agusan, Bukidnon, Lanao, and Davao changes in the engineering personnel have also taken place. By reason of the difficulty in securing the services of a qualified engineer, Mr. Kilby, foreman, has been appointed acting engineer for the last-named Provinces. He has rendered service in this Province for several months, but arrangements are being made for his transfer to another Province. The difficulty in securing qualified men to handle the local engineering work has been largely due to greater prospects for advancement offered by the war to competent civil engineers. Meanwhile the high cost of living in the Provinces, especially in Davao, has created added difficulties. The war, however, has ended and I hope the bureau of public works in Manila will no longer encounter difficulties in the selection of an efficient personnel.

The public works in the Department have also met obstacles in securing laborers from Cebu and other Provinces at a daily wage of from 50 centavos to 1 peso and 20 centavos with subsistence and under the condition that they work for one year, or 275 days, with the promise on the part of the Government to give them homesteads at the conclusion of their term of service. However, the fear of malarial sickness and the idea of living in remote and isolated regions have been the principal factors which hindered the recruitment of laborers. On the other hand, the ease with which laborers could earn their living in private employment, especially with owners of hemp fields, who offered them an average wage of ₱2 a day for work almost independent from the heat of the sun and free from overseers has also contributed to the great difficulty encountered in retaining the services of laborers. Consequently the public works suffered delays.

During the year the immigration of the Moros from Lanao to Davao and Agusan in search of work has been greatly accentuated. Many of these have accepted contracts to work with the Government, and their services have been satisfactory. However, the Department has continued the policy of restricting the immigration of laborers from places where they are needed. Nevertheless the meager assistance which the few immigrants from Lanao contributed to the Provinces in need of laborers could be considered in a way as a factor in the solution of a certain portion of the labor problem in our Provinces.

The following pertinent report of the supervising engineer shows exactly the status of the public works within the Department:

"AGUSAN PROVINCE.

"Roads and trails.—The following amount of road and trail existed in the Province on December 31, 1918: Twelve and six-tenths kilometers first-class road, 5.7 kilometers second-class road, 19.8 kilometers third-class road, 39 kilometers first-class trail, 90 kilometers, approximately, second-class trail.

"There was no increase during the year in first or third class roads. The above includes an increase of 1.5 kilometers of second-class road and 20 kilometers of first-class trail. Regular maintenance on all existing roads and trails was carried on throughout the year. New road construction progressed rather slowly, due to scarcity of labor and the great difficulty in obtaining surfacing materials. Six wooden bridges were strengthened on the Butuan-Cabadbaran Road and materials gotten out for reconstructing and strengthening about 10

more bridges. This road will be opened for light traffic during dry weather as soon as the bridges are completed.

"Telephone lines.—There were 95.6 kilometers of telephone existing in the Province on December 31, 1918, of which 21 kilometers were constructed during the year. A telephone switchboard has been requisitioned, and upon receipt of same a telephone central will be installed, which should greatly improve the service and tend to cause a greater demand for private phones in Butuan and Cabadbaran.

"Buildings.—The Butuan hospital building was started during the year and on December 31 had been completed to above the floor line. All the materials are on hand to complete the building with the exception of a portion of the lumber. This building is to be an attractive modern hospital building with concrete pillars, frame structure, and cement tile roof.

"Materials were requisitioned for an agricultural school building at Ampayon and for an extension to the Butuan school building. Two other new building projects which are to be started in the immediate future are the Cabadbaran municipal building and the Cabadbaran intermediate school building.

"River channels and wharves.—A considerable amount of cleaning was accomplished this year in the river channels of the upper Agusan. The unusually low water greatly aided in the location and removal of submerged tree trunks and snags.

"An insular allotment of ₱2,500 was made available for the extension of the Butuan wharf, and work is just about to be started on the project. Investigations are being made of the channels at the mouth of the Agusan River with the hope that funds will be available during the present year to accomplish some dredging work at this point.

"Artesian wells.—Two wells were drilled during the year by means of a hand rig—one at Las Nieves and the other at San Ignacio. The former proved unsuccessful, but at the latter town a pump well was obtained.

"General remarks.—A considerable amount of survey work and road location was accomplished during the year. There are balances on several road projects due to scarcity of labor, but the Moros are now being induced to work on the roads to a certain extent under the "paquiao" system. It is believed that under the present district engineer, public works and road work especially will be carried on much more economically and much more work accomplished during the present year than during 1918.

"BUKIDNON PROVINCE.

"Roads and trails.—There is no first-class road in the Province. There was, on December 31, 45.5 kilometers of declared second-class road, of which 18 kilometers was declared during 1918. This road is not surfaced but is well graded and maintained by drags, so that it is passable for automobile and cart traffic continuously throughout the year. In addition to this there was, on December 31, 145 kilometers of third-class road, 118 kilometers of first-class trail, and approximately 120 kilometers of second-class trail. During the year a road with maximum grade of 6 per cent was constructed across the Utugan Canyon. This now makes the road passable for auto and carts all the way to Malaybalay with the exception of the Kulaman Canyon, across which it is hoped to construct the road this year. Drags are proving very successful in keeping the earth roads in excellent condition in this Province.

"An 80-foot wooden truss bridge was constructed over the Melupali River and repairs made to a number of other wooden bridges in the Province.

"Telephone lines.—There was no increase in length of telephone lines during the year, but 172 kilometers of lines were maintained. Of this amount 70 kilometers are duplicate lines.

"Buildings.—Materials have been ordered and partly received for quarters for the division superintendent of schools, the Mailag Agricultural School, and two temporary school buildings. Work has been started on the first-named project. All these buildings are to be wooden buildings with galvanized-iron roofs.

"Waterworks.—Work of constructing a waterworks system for Malaybalay was started late in the year and approximately half completed on December 31. This is to be a gravity system furnishing street taps under a low pressure from spring supply.

"General remarks.—The difficulty in transporting materials and supplies across the Kulaman Canyon greatly retards public works projects in Bukidnon

Province. Funds for constructing the road across this canyon should by all means be made available this year, in which case a marked change in the rapidity of construction work is looked for. Mr. Marcelino Angeles, a former foreman in the Province, has recently been made acting district engineer and seems to be taking hold of the work in a most creditable manner.

"COTABATO PROVINCE.

"Roads and trails.—The only increase in road and trail during the year was 0.7 kilometers of first-class road. The small amount of new construction accomplished is due to inadequate funds and personnel, and the large amount of trail to be maintained. The existing roads and trails in the Province on December 31, 1918, were as follows: 10.7 kilometers first-class road, 2 kilometers second-class road, 50.5 kilometers third-class road, 169.3 kilometers first-class trail, 224 kilometers (approximate) second-class trail.

"Practically all the above road and trail has been under maintenance during the year. Fifteen temporary wooden bridges have been completed on the various roads and trails in the Province.

"Telephone lines.—There has been an increase of 26 kilometers of telephone lines completed during the year. On December 31 there was a total of 296 kilometers of telephone lines under operation, of which 128 kilometers are double or duplicate lines.

"Buildings.—A 3-A temporary school building and dormitory, both of timber construction, with galvanized-iron roofs, were completed at Dinaig. Two market buildings, 15 by 50 meters, of timber frame with nipa roofs, were completed at Salumbao and Pikit. The Piang Agricultural School dormitory was started on December 1 and materials ordered for the girls' dormitory building at Cotabato. Both are timber structures with galvanized-iron roofs. It is expected to complete these two buildings by June.

"Dredging dikes.—Bureau of public works ladder dredge No. 2 arrived at Cotabato on November 9, 1918, and has since been operating in cutting through the bar at mouth of the Cotabato River. The dredge has been operating at approximately half efficiency, due to lack of a launch for handling scow and due to the fact that only one scow is available. A launch has recently been rented for use with scow, but so far it has proven impossible to obtain another scow from the bureau of public works.

"Two and a half kilometers of a dike between Pikit and Pagalungan have been completed.

"Artesian wells and waterworks.—The well started at Dulauan during 1917 proved unsuccessful, and was abandoned in May, 1918, after reaching a depth of approximately 1,700 feet. The well rig was then moved to the town of Cotabato and a well started on Constabulary Hill. On December 31, 1918, the well had reached a depth of 450 feet without any indications of fresh water.

"A small waterworks installation was completed for the Awang School.

"General remarks.—There are unexpended balances on the various projects amounting in all to approximately ₱94,000. This is due to the fact that active work on some projects could not be undertaken until equipment was obtained, and the appropriations for several of the building projects were not made available until so late in the year that very little was expended by December 31. The engineering supervision in the Province is of a most excellent quality, and if Mr. Tillet, the present engineer, remains, public works activities will undoubtedly progress most satisfactorily during 1919.

"DAVAO PROVINCE.

"Roads and trails.—The principal road and trail work accomplished during the year was grading and improving existing roads and trails, so there is practically no increase other than approximately 20 kilometers of second-class trail which was changed into first-class trail. The 2.8 kilometers of road between Davao and Santa Ana has been widened and portions resurfaced. There was on December 31, 5.8 kilometers of declared first-class road; 102 kilometers of earth road, a portion of which has been declared second-class, but is in reality third-class road; and approximately 525 kilometers of trail, varying from first-class improved trail to entirely unimproved foot trails.

"Four temporary wooden bridges have been rebuilt on the Mati-Boston road, a number of concrete pipe culverts installed, and several other wooden bridges repaired.

"Telephone lines.—Telephone lines were extended 54 kilometers during the year, making a total of 376 kilometers in the Province, exclusive of Davao city lines. Of this 45 kilometers are duplicate lines. The great length of telephone line makes it extremely difficult to maintain and keep all this line open, but every effort is being made to improve the service on the long lines.

"Buildings.—An employees' wooden cottage, with tar-paper roof, has been completed at Davao, and the construction of one or two more is contemplated. A temporary wooden hospital pavilion has been constructed for use until the new hospital can be erected. A hospital site has been obtained and cleared and a portion of the materials for the permanent hospital building requisitioned. This building is to be a duplicate of the Butuan hospital, having concrete pillars and porch and a frame structure. A concrete water tank was installed at the constabulary barracks at Mati and repairs made to the building. Materials have been ordered for a No. 6 wooden school building and teachers' cottage at Mampising. There are quite a number of wooden school buildings to be undertaken during the coming year.

"Wharves.—The Davao Wharf was entirely rebuilt with Liusin piling from the shore out to the tee. Lack of funds held up the work for a time in October and November, but the work is now being rushed.

"Waterworks.—An investigation for a gravity waterworks installation for the city of Davao was made during the year and measurements of flow taken of springs which it is proposed to utilize for a source of water supply. It is hoped funds will be made available to start the project this year.

"General remarks.—Practically all labor has to be imported, and the slowness with which laborers have been furnished has greatly retarded public works projects in Davao. The result is that many of the projects show a considerable balance. Work, however, is now progressing well on many of the projects. A change in personnel of the district engineer's office is contemplated which will, it is believed, insure better results this year.

"LANAO PROVINCE.

"Roads and trails.—The following increases in roads and trails occurred during the year; 6 kilometers first-class road, 7 kilometers third-class road, 263 kilometers first-class trail.

"This office has no exact data upon the total length of roads and trails existing on December 31, 1918, except in the case of first-class road, which totaled 14.6 kilometers. The total amount of roads and trails can be obtained by telegraph if same is desired for the Governor's report.

"In addition to the regular maintenance, 9 kilometers of the Overton-Keithley road has been resurfaced. The Overton bridge, a 38-meter combination wooden pile and truss bridge, has been reconstructed. Two wooden pile bridges on the Misamis boundary road were completed and a considerable amount of repair and protection work done to the Iligan concrete ford. In addition to this, a number of small temporary wooden bridges were constructed in connection with new trail construction.

"Telephone lines.—There was a total of 238 kilometers of telephone line existing in the Province on December 31, 1918. There was no increase during the year, but between 50 and 60 kilometers of existing lines were rebuilt and new poles erected.

"Buildings.—The Lumbatan farm school buildings were repaired, painted, and roofed with galvanized iron. Two teachers' cottages, a storehouse, and a bathhouse were also constructed for this school. The provincial commander's residence at Dansalan was completed early in the year. Repairs were also made to the constabulary barracks and officers' quarters at Dansalan.

"Wharves.—The construction of a new wooden wharf at Overton was begun in September, and 200 linear feet of pile bents were driven by December 31. Delay on the part of the contractor in delivering piles has greatly retarded the project. It should, however, be completed within a few months. Upon the completion of the wharf a Government bodega is to be constructed on the shore near the wharf site.

"On Lake Lanao a new approach was built to the Tamparan wharf and additional fender piles driven at this wharf and at the wharves at Lumbatan, Ganassi, and Keithley.

"Hydroelectric investigation, general remarks.—An extensive investigation and report upon a power development for Keithley and Dansalan was made and

submitted to the director of public works during the year. This project includes a water supply for Dansalan. In connection with this project the possibility of lowering the lake level was investigated with the idea of reclaiming in this manner a large track of rice land bordering the lake. It is hoped that funds will be available this year for the installation at least of the hydroelectric plant.

"The present engineer is a very capable man and is carrying out the public-works program in a most competent manner.

"SULU PROVINCE.

"Roads and trails.—The following amount of roads and trails existed in the Province on December 31, 1918: 29.9 kilometers first-class road, 14.7 kilometers second-class road, 9.7 kilometers third-class road, 116.5 kilometers first-class trail, 65 kilometers second-class trail.

"The only increase during the year included in the above is 5 kilometers of first-class road. The surfacing on the Sulu roads proved far too light for the heavy truck traffic to which they are now subjected, and consequently the greater share of 1918 road funds was expended in resurfacing.

"Two rubblestone and concrete culverts were constructed on the Jolo-Parang road and repairs made to several of the temporary bridges. One new wooden-pile bridge was also constructed on this road, one on the Seit Lake Road, and another completed except for decking.

"Telephone lines.—There are 85 kilometers of telephone lines in the Province, of which 5 kilometers were constructed during the year. This is exclusive of Jolo city lines. The telephone central has been moved to the municipal building and the service considerably improved.

"Buildings.—The following buildings have been completed during the year: One domestic science building, a frame structure with tile roof; one No. 1 wooden school building with tile roof; one No. 2 wooden school building with tile roof; four teachers' wooden cottages with tile roofs; two temporary wooden frame markets with nipa roofs.

"Sulu Province has extensively taken up tile roofing for school buildings. The tiles are made at Zamboanga and shipped to Sulu Province. The tile makes a very pretty roof, somewhat cheaper than the present cost of galvanized-iron roofing, but as yet has not proved absolutely water-tight under driving rains.

"Considerable repair work has been done to the customhouse building and also to the military buildings which were turned over to the civil government at the beginning of the year. Quite an extensive school building program is contemplated for the present year.

"Port works.—A number of new wooden piles have been driven under the Jolo wharf and repairs made to caps, stringers, and decking. New fender piles have also been driven along the front of wharf. A small wooden launch wharf was constructed at the eastern side of causeway. Repairs have also been made to the Siasal wharf.

"General remarks.—Owing to the fact that expenditures were made by the treasurer's office on public works projects without being taken up in the district engineer's books and that equipment was purchased without appropriations being made to cover same, overdrafts to the amount of approximately ₱27,000 have been incurred on public works projects. These overdrafts will be immediately covered from 1919 funds. Work was started during the first of the year on too large a scale for the funds available. It is planned to ascertain how much funds are available this year and to plan the work more in accordance with the funds available. The public works supervision is being very ably supervised by the present district engineer.

"ZAMBOANGA PROVINCE.

"Roads and trails.—The following increases in the road and trail system of the Province has occurred during the year: Eight kilometers first-class road, 4 kilometers second-class road, 10.9 kilometers third-class road.

"The Province had on December 31 the following amount of roads and trails: Fifty-three and eight-tenths kilometers first-class road, 14.6 kilometers second-class road, 40.7 kilometers third-class road, 120.2 kilometers first-class trail, 285 kilometers (approximately) second-class trail.

"In addition to the regular road maintenance a considerable amount of resurfacing has been completed on both the Zamboanga East Coast and Zambo-

anga West Coast roads. A wooden truss bridge with pile bent approaches, totaling 120 feet in length, was constructed at Isabela. A 50-foot wooden pile bridge was completed at Talungatung. A 28-foot steel-girder bridge with wooden deck and concrete abutments was constructed over the Calibato River on the Manikaan-Bolong road. One concrete abutment was completed and practically all materials purchased for an 80-foot truss bridge with pile bent approach for the Manikaan Bridge.

"Telephone lines.—There is a total of 213 kilometers of telephone lines under operation in the Province exclusive of the city lines. Of this 28 kilometers are duplicate lines. There was no increase during the year.

"Buildings.—The largest building project is the Zamboanga Normal School, which has progressed steadily but somewhat slowly during the year. It has been impossible to obtain enough carpenters to push this job. Nevertheless it is hoped to complete the building in about one year. The building will be one of the finest in the Philippines. It is to be a two-story concrete structure with tile roof and is estimated to cost approximately ₱270,000.

A very attractive concrete pavilion for the Zamboanga General Hospital was completed and opened in September. A wooden contagious pavilion with galvanized-iron roof was completed at the rear of the concrete building.

A 3-A wooden school building with tile roof was completed at Talungatung. Materials have been ordered for a trade-school building, a domestic-science school building, and a block of 10 double 4 by 6 meter-tiendas, all of which are to be of concrete construction with Zamboanga tile roofs.

"Port works.—The 12 by 63 meter Zamboanga concrete pile wharf extension was completed in March and the asphalt wearing surface placed in May. During September and October bureau of public works ladder dredge No. 2 dredged Rio Hondo to a depth of 14 feet and dredged behind the Zamboanga concrete wharf to a depth of 20 feet. A small wooden wharf was also constructed at Latuan, Basilan Island."

AGRICULTURE.

The agricultural development of Mindanao-Sulu during the year 1918 has been characterized by the great activity displayed in the cultivation of coconuts, which has greatly occupied the attention of farmers, especially the small landholders, including Mohammedans and pagans. In almost all parts, even in remote regions, like the small islands of Tawi-Tawi, may be found new and extensive coconut plantations.

In Davao the big plantations have also been gradually substituting their abaca lands for coconut. This activity has been due to the fluctuating price of abaca during the year 1918 and to the tremendous growth of the oil industries, which gave great importance to the cultivation of coconut.

The development of agriculture in Mindanao-Sulu has been considered as one of the principal activities of the Government and has systematically received due attention during the year. In Zamboanga there is an agricultural advisor who, together with the agricultural assistants of the Provinces, form an expert body of our agricultural campaign. The schools have also done their important part in undertaking work which is not only beneficial for the present but serves as a firm basis for an agricultural and prosperous country. Our Provinces, municipalities, and municipal districts have displayed unusual interest in this matter by the adoption of rules and necessary measures tending to develop local agriculture. In this manner, with the considerable increase in the number of coconut plantations, large areas have also been planted to food crops, while a considerable number of domestic animals have been provided for.

The same activity in the propaganda work in Luzon and the Visayas has been continued, as also the bringing down of home seekers and laborers, with the understanding that they will later on become homestead owners. About the middle of the year there came to Mindanao-Sulu a party of merchants, who after a few weeks formed a corporation and filed application for the agricultural exploitation of several thousand hectares of land along the southern coast of Cotabato.

Cattle raising has also received proper attention during the year by the organization of provincial ranches, introduction of pure Indian cattle breeds, adoption of measures tending to prevent the slaughter of cows, and by inculcating the necessary instructions for the best method of animal husbandry.

In this way due importance has been given to this industry, and the people, appreciating its value, are becoming skillful in its management. At the beginning of the year 1918 there appeared mouth-and-foot disease in the ranch of the Crescent Star Cattle Co., in Diclom, Bukidnon, and rinderpest in the Provinces of Zamboanga, Cotabato, and Davao. "Zurra" has also been registered in Cotabato and has taken a heavy toll among horses. Although rinderpest has caused considerable loss, however, there has been saved a selected number of cattle which is now being utilized as the basis of the future development of this industry. The Crescent Star Cattle Co., of Bukidnon, has at present 1,200 cows, with an average of five births daily. We have at Jolo 61 head of pure Indian cattle breed; in Zamboanga, 36 head of the same breed; in Cotabato, 36; and Lanao, 40. This number will be used as the basis of the improved breeds of cattle that are desired to be obtained.

The Japanese are insistently, though silently, penetrating into Davao. Every arrival of a vessel from Australia, Japan, or Manila brings hundreds of Japanese into that Province. It was estimated that about the middle part of 1918 some 9,500 Japanese settled in Davao, and at the close of the same year there were found at least 12,000 Japanese in that region. We have found it difficult to compile statistics of the Japanese settling in Davao, for the reason that those coming on insular vessels were not required to register at the custom-house in Zamboanga, but the estimate given above is a very liberal one. It is believed that the Japanese immigration has been purposely carried on in accordance with a preorganized scheme.

To attain this end they are employing every conceivable means within their power to gain possession of all available land in Davao Gulf. I remember the instance when a schooner illicitly attempted to land at Mati several Japanese immigrants, but the act was discovered and the Japanese sailors were arrested, but not the passengers, numbering more than 20, who were able to disembark. They have also gone to the extent of marrying native women, with the principal object of taking hold of their land and receiving protection as a result thereof from the parents and relatives of their wives.

The following is the list of plantations in Davao sold to Japanese concerns since the latter part of 1917:

	Price sold.
Magnaga plantation, American	₱35,000
Piso coconut plantation and cattle ranch, American	275,000
Southern Cross plantation, American	105,000
Garrido and Giminez, Spanish	85,000
Sawyer plantation, American	60,000
Prudasan plantation, American	120,000
Nap-napan plantation, American	90,000
Total	770,000

Plantations, 100 hectares and over each, owned by different nationalities in Davao Province:

Nationality.	Number of plantations.	Land occupied.		Average size of plantations.	Improvements.		
		Hectares.	Per cent.		Hemp (hectares).	Coconut (number).	Rubber (hectares).
Japanese	71	56,619	58	797	2,946	29,311	.....
Americans	34	19,210	20	565	2,196	78,360	129.5
Filipinos	44	16,078	17	365	1,260	47,321	24
Others	15	6,157	5	410	347	58,300	.....
Total	164	98,064	100	597	6,749	218,362	155.5

The following statistical table contains data of principal crops produced during the year 1918. The Lanao column is not filled on account of not having received the report in time. In accordance with the same, 42,861 hectares have

been planted to rice; 73,929 hectares to corn, and 658,206 hectares to coconut. From this, however, there are other plantations which were not yet reported and from which we have no data:

Classes and year of organization of domestic corporations of Mindanao-Sulu.

Year.	Agricultural.		Commercial.		Industrial.		Total.	
	Num-ber.	Paid-up capital.	Num-ber.	Paid-up capital.	Num-ber.	Paid-up capital.	Num-ber.	Paid-up capital.
1906.....	2	P102,600	1	P6,200			3	P108,800
1907.....	5	156,665	1	7,500	2	P26,500	8	190,665
1908.....	2	31,000	1	30,000	3	79,900	6	140,900
1909.....	1	4,300			3	67,800	4	72,100
1910.....	3	28,025	3	28,200			6	56,225
1911.....	4	115,000	2	59,800			6	174,800
1912.....	4	74,728	4	219,625	3	109,700	11	404,053
1913.....	6	219,200	3	73,575	3	218,850	12	511,625
1914.....	9	122,660	3	47,100	2	279,500	14	449,260
1915.....	8	65,100					8	65,100
1916.....	8	182,310					8	182,310
1917.....	41	722,720	5	180,500			46	903,220
1918.....	35	500,600	5	113,000	2	3,165	42	616,765
Total.....	128	2,324,908	28	765,500	18	785,415	174	3,875,823

Capitalization of domestic corporations of Mindanao-Sulu, by provinces.

Province.	Number of corporations.	Capital.		
		Authorized.	Subscribed.	Paid.
Agusan.....	2	P448,000	P114,178	P54,178
Bukidnon.....	1	200,000	40,000	10,000
Cotabato.....	7	360,600	237,100	147,600
Davao.....	108	5,218,400	3,634,100	2,014,635
Lanao.....	5	350,000	229,850	207,400
Sulu.....	9	470,000	196,500	160,725
Zamboanga.....	44	4,784,500	1,910,370	1,305,910
Total.....	176	11,831,500	6,362,158	3,899,913

Agricultural data, 1918.

Province.	Number of trees planted.				Number of hectares planted.			Live stock.		
	Coco-nuts.	Abaca.	Coffee.	Cacao.	Rice.	Corn.	Vegetables.	Cows.	Cara-bao.	Horses.
Agusan.....	83,000	3,300,000	5,081	3,000	371	405	150	475	350	
Bukidnon.....	5,000	None.	47,000	3,280	620	2,300	200	7,170	6,000	2,000
Cotabato.....	259,800	25,000	None.	500	30,000	6,000	800	3,350	25,000	200
Davao.....	100,406	25,953,000	7,018	748	11,725	8,626	68	20,955	6,794	2,323
Lanao ¹		450,000	None.	None.	2,000	500	400	6,000	2,500	1,000
Sulu.....	60,000	450,000	None.	None.	8,145	2,098	(*)	10,000	11,600	3,000
Zamboanga.....	150,000	350,000	12,000	5,000						
Total.....	658,206	30,078,000	71,099	12,508	52,861	19,929	1,618	47,950	52,244	8,583

¹ No report submitted.

^{*} No data.

AGRICULTURAL COLONIES.

During the year 1918 the undersigned, in behalf of the Department governor, visited on three occasions the Cotabato agricultural colonies. About the middle part of June a great flood occurred in the territory, which entirely destroyed

the growing crops. This was later followed by a two weeks' intense drought, which killed the plants that survived from the flood. These calamities compelled the colonists to make extraordinary effort to plant rice and corn so as to regain in a way the loss they sustained from these disasters. Through an allotment of ₱5,000 in the form of aid there was built a dike 3 kilometers long, which when finished will protect a great part of Colony No. 1. Plans are now under way to extend this dike up to Talitay; also it is planned to construct another dike, which at the same time may serve as road from the central building of the colony in Pagalungan toward Cabakan.

The dikes are made only of earth, as they were constructed to remedy the situation temporarily. For this reason, it has been deemed advisable to transfer the colonists from the lowland to the highland, where the soil could be advantageously used for rice or corn planting. Therefore explorations have been made by the provincial authorities and after a close study and examination of the matter, the provincial governor finally decided to select Bual as the most suitable place for the colonists. Bual, which is considered as one of the most beautiful sections of the valley, possesses an exceptionally rich soil of alluvial deposit, situated on a smoothly level plain covering an area of approximately 20,000 hectares, at a sufficient altitude to protect it from flood. The only difficulty found in reaching that point is the lack of good transportation facilities, which could be successfully overcome if the existing small canal connecting with the Cotabato River is dredged. The canal will be 3 kilometers in length and 15 meters in width so as to permit comfortably the passage of the *Hall* and other launches.

Notwithstanding the flood, the colonists succeeded in cultivating during the year 2,262 hectares, 509 hectares of which were planted to palay and 1,173 hectares to corn, while the rest were planted to tobacco, peanut, sweet potatoes, sugar cane, yams, tanga-tanga, cacao, papaya, gabi, banana, coffee, and coconut. There having been planted 4,231 coconut trees. During the year, 2,528 cavans of palay and 6,448 cavans of corn were harvested, there having been left unharvested 445 hectares planted to corn. Corn obtained a favorable market during the year, 1,834 cavans having been sold in Cebu at ₱7 per cavan.

Apart from the inundation already mentioned, the colonists also suffered from smallpox in April and from influenza in November, causing a casualty of about 95 per cent of the colonists. These epidemics seriously affected planting and harvesting. Zurra and an unknown cattle disease also appeared in the colony and were reported immediately to Manila, but by reason of the fact that the veterinary personnel of the Department was engaged on an urgent work in another Province, these diseases have not been carefully attended to. However, Dr. Samson, the Department veterinarian, is being detailed to Cotabato to take charge of this work. The plan of Gov. Carpenter to furnish the colony with a tractor is an excellent one. One of the great difficulties encountered by the colonists is the very fertility of the soil, whereon the weeds grow and thrive abundantly. A colonist living under this condition with only a single carabao to help him in his work finds himself greatly handicapped in tilling his land.

There are at present in the Cotabato colonies 470 families, consisting of 2,738 Visayans, nearly all of whom came from Cebu, and 473 Moro Maguindanao families of 2,894 persons. These families live in colonies Nos. 1, 2, 3, 5, 7, and 9, the last of which is located in Glan and is made up of Visayans from Cebu. In spite of the many reverses which these colonies suffered, a great many of them have already settled their obligations to the Government. The completion of the Paidu-Pulangui road, covering a distance of approximately 14 miles, will afford a new incentive to the present activities and rapid development of the colonies, the majority of which are located in the interior and are lacking in communication facilities. Home industries, like poultry raising, are gradually growing in importance in Cotabato, and every inducement will be given to interest these families in their management. Unquestionably the completion of the road will afford the only solution of the difficulty encountered in the transportation of products. A canal, 2,220 meters long and 2 meters wide, has also been constructed, which will serve as an outlet for Dunguan, one of the most productive sections in the colony. The sum of ₱554 was expended in the construction of this canal and in building the headquarters of colony No. 5 in Pagalungan.

Additional information regarding these colonies may be found in the report of the secretary of agriculture and natural resources. However, before leaving this subject, I beg to make note of the following: The success obtained in amal-

gamating the different tribes of Mindanao through the establishment of these colonies is undisputable. This is its principal objective. It is almost a dream to imagine how in a place which seven years ago was nothing but wild cogon lands, where fierce Maguindanaos and murderous outlaws lay in wait to rob cattle and kill their owners, especially if they be Christians, there now live under the most cordial relationship of amity and sympathy, helping one another and considering each other as brother, a people who formerly were bitter enemies—Mohammedans and Christians. This is an accomplished undeniable fact, and shows in a very evident and conclusive manner the accomplishments resulting from the wisdom of such a plan. Not only tolerance and mutual trust exist among these people, but also ardent desires on the part of both, especially of the Moros, to bury forever the differences between them and their Christian brothers.

But this unity in thought and sentiment may be more clearly seen in the public schools of the colony, where it is extremely difficult to distinguish the one from the other. Dressed in the same attire, seated on the same bench in drinking the fountain of knowledge, and playing hand in hand, the Mohammedan and Christian children feel completely united in sentiments and ideals as they daily sing "Philippines, my Philippines," and are coming to realize that they are sons of but one fatherland. After 15 years have elapsed from now, when the children now attending the public schools become of age as to entitle them to the right of participation in the determination of public affairs, with a clear understanding of each other's duty as brothers, ready at all times to help mutually, then, and only then, will the work of amalgamation which was being made possible by the establishment of agricultural colonies yield its desired fruits and be a blessing to our country for the great good which it has accomplished.

I have passed several nights in the colonies and I have met Moros who, feeling the warmth of brotherhood existing between the different elements and sharing the pleasures of the festivities celebrated in localities which formerly were nothing but wild bushes and the abode of outlaws, expressed to me with a thrill of joy that all they have seen appealed to them as something miraculous. This is a term applicable to the marvelous transformation achieved in Cotabato, which is of the utmost importance in its social, political, and economic development of our country.

The secondary aim sought by the establishment of these agricultural colonies is to effect a uniform distribution of population by bringing down inhabitants from the densely populated districts to sparsely inhabited regions and to bring about a maximum percentage of production for themselves and the country. The colonies are no longer in need of assistance and are at present self-supporting. It is true, indeed, that calamities befell upon them, but I have a strong belief that the same will be a complete success.

PUBLIC LANDS.

One of the most important matters in the Department of Mindanao and Sulu is that which refers to the survey and adjustment of private and public lands. The present program is entirely constructive in nature and proper attention with regard to the question of public lands constitutes one of the most important factors which contributes to the solution of diverse problems confronting the Department. In this Department "calfigin" system is in vogue, by means of which a person clears a forest, utilizes it for two or three years, abandons it later, and removes to another place. This system of the calfigin maker gives him the idea that he is not only owner of the lands which are opened by him but also of those surrounding the same, the area of which being unlimited and is vulgarly known as "sulong." For this reason when a settler comes along and locates his homestead in any of the above-named places he encounters always some person who styles himself as the owner of the same. Then arises the question of placing the immigrant in the alternative of leaving the place or quarreling with the pretended owner. In this case the settler will return home with the idea of having been deceived in his failure to find the "promised land," with a black impression of Mindanao.

These facts are true and are happening with frequency, producing disastrous consequences. They encourage speculators of bad faith, foster laziness, retard greatly the material progress of the country, and serve as a barrier in the work of amalgamation by obstructing the personal contact of the different elements,

not to mention the loss of a home and of an independent life which the immigrant has dreamed of with enthusiasm, and for which he has decided to devote all his efforts and energy. Yet all these may be due to the fact that public lands have not been properly surveyed.

Another significant aspect of the question is that the survey of the public lands and the consequent adjustment of titles thereto, especially of those belonging to the small landholders, will oblige the seminomadic tribes to stay permanently on a given place, who, following the life of a happy man, however small his holdings may be, is better disposed for his own good and that of his family to help at any time in the maintenance of peace and order, thus making himself an element for the common welfare.

The public lands of Mindanao and Sulu must be surveyed if it is desired that these islands develop rapidly. The adjustment of public lands constitutes an important factor for the future economic prosperity of a country.

During 1918 there have been filed with the bureau of lands 2,569 homestead applications, which cover an area of 30,324 ares; 1,705 applications for free patent, covering an area of 7,781 ares; and 103 applications for lease of public lands, covering an area of 29,937 ares. These were the principal transactions, aside from the numerous activities with which the bureau of lands in Zamboanga has been engaged. Other data in this connection may be found in the report of the director of the bureau of lands.

FOREST.

The bureau of forestry in the Department has been exerting every effort to conserve and protect our forests from the destructive practice of making "caifigins" and to make them produce the greatest yield of forest products. Due to this effort, a notable decrease in the proceedings instituted against "caifigin" makers has been observed, and this indicates that the measure taken is producing good results.

There are at present in territories within the Department of Mindanao and Sulu 11 sawmills, which produced 64,535 cubic meters of lumber during 1918. This figure does not include the output of the 157 small concessions in actual operation. In Tawi-Tawi and other southern islands of Sulu the manufacture of ties for the railroads of Manila is rapidly developing. At the present writing no data are available to show the total number of ties produced, but during the year several vessels, among them the *Romulus* and the *Kaponka*, of about 2,000 tons' displacement, called at these ports for these ties.

Of the minor forest products heretofore known and which are being exploited under a commercial basis, the following are the principal ones: Almaciga, beeswax, rattan, biao, diliman, dye bark, charcoal, dyewood, firewood, gogo bark, gutta-percha, tan bark, and tañgal bark.

In Jolo approximately 2,533 hectares of land are preserved as "Teak Reservation." Plans are also under way for establishment of similar reservations in Basilan, Lanao, and Davao. There is being established in Pasonanca a "Teak and nursery plantation" covering approximately 5 acres. Teak wood may be found in the following places: Butuan, Malabang, Buluan, Lamitan, Bohelbung, Santa Maria, Masinloc, and Jolo. Next to Jolo the Buluan teak land, which contains approximately 65 hectares, ranks second in extent and importance.

Besides the teak, molave, narra, tindalo, and other first-group timber, we have in Agusan and Surigao what is known as the Mancono (Palo-hierro), the hardest kind of wood known. I have seen in Butuan and Cabadbaran posts made of this timber possessing a durability which could withstand an indefinite usage. It might be worth while to know the possibilities which this wood has in the world market, for it will serve as an abundant source of income to the country.

The lumbering industry of Mindanao would have been much more lucrative had there been available adequate transportation facilities sufficiently to meet the demands in this country, China, and other foreign ports. This deficiency in transportation has at times caused during the year an accumulation of products which compelled the higher authorities of Manila to make arrangements for the *Liscum* and *General Weeks* to call at Mindanao to relieve the situation. The schooner *Foo-Kien* towed by the coast guard *Gilbert* has also come for the same object. The firm Atkins, Kroll & Co. has also lent services by making available their three schooners, which was also in the case of the steamship *Imam* of the Basilan Lumber Co., which carried lumber for Cebu.

TRADING SYSTEMS.

In accordance with Act No. 2660, trading systems are being operated in all the Provinces of the Department. The trading stores are located in districts centrally situated capable of exerting influence within a large, well-populated territory with a view of promoting commerce and trading intercourse and the development of agricultural and industrial possibilities of isolated regions devoid of trading facilities. Through these trading stores the people are accorded facilities to dispose of their produce and to buy merchandise at reasonable prices, thus preventing their exploitation by unscrupulous traders.

As the circulation of money in most of the backward settlements is nil, it has been found difficult to impose and collect taxes therein, and only through the medium of trading stores this obstacle for the enforcement of taxes has been overcome.

The activities of trading systems have been considerably enlarged during the year by the purchase and sale of cattle for resale to the public as follows:

1. Those fit for breeding purposes are sold at cost, plus transportation and other expenses, to people living in regions provided with abundant pastures but where no cattle are raised on condition that purchasers shall bind themselves not to sell or otherwise dispose of the animals within two years from the date of purchase, limiting from one bull to five cows that which can be purchased by each head of family.

2. Those fit for agricultural purposes are sold preferably to small farmers at a price not exceeding 10 per cent profit.

3. Those unfit for breeding purposes are sold for slaughter.

Under the foregoing conditions it can be readily seen that the extension and development of the trading system throughout the Department constitutes a no less important factor in the encouragement of cattle breeding by private individuals with a view to supplying the increasing demand for cattle which has been more or less accentuated, especially in those remote and isolated regions of Mindanao.

The lack of work animals and the difficulties encountered to secure them by purchase at a reasonable price has greatly hindered the work on the fields and retarded the development of agriculture in Mindanao-Sulu. However, it is believed that the sale by the trading system of animals fitted for agricultural purposes at cost and with practically a small profit to the Government will undoubtedly afford a better opportunity for our small farmers to provide themselves with the necessary work animals they need for their farms.

As the trading system reports are not as yet all rendered, statistical figures can not be given of the transactions of trading systems during the year, but these data would appear in the report of the Insular auditor.

MINERAL PRODUCTS.

The work preparatory to the exploitation in great scale of the coal mine at Sibuguey, Dumanquilas, Zamboanga by the National Coal Co. is progressing rapidly. During the year 1918 the work has been properly organized. Houses and adequate lodgings for the personnel have been constructed, also there have been provided launches and other means of maritime and river transportation. There have also been taken into that place railroad and necessary apparatus for the exploitation of the mine. The extraction of carbon has not as yet commenced, but preparations have almost been terminated, and the exploitation of the mine will commence very soon. The coal in said places is of high-grade quality. It is equal to, if not better than, that taken from China and Japan, which is the one more generally used at present in the islands. The success of this work should be of positive good for our country as it would respond to one of our urgent needs and at the same time render immense benefits to the National Treasury.

The oil mine in the region of Pidatan is not as yet exploited, nor the gold and iron mines at Agusan and different points of Mindanao.

MARINE PRODUCTS.

In Mindanao and Sulu waters there are operating in the neighborhood of 57 pearl boats devoted, as its name would indicate, to fishing pearls, sponges, shells, coral, etc. It is quite difficult to make an exact estimate of the value of pearls fished during the year 1918, because in the majority of cases the

sales have been made by small ambulant fishers and naturally they are difficult to register; but it is estimated that this industry has rendered a product valued at ₱217,024.80.

The sponge industry remains in its primitive state by reason of the lack of capital to develop it appropriately, but it is imaginable that in Mindanao and Sulu Seas there abound many places which are or may be converted into splendid producers of sponge.

The fishing industry is developed under the same routine method employed as heretofore. The majority of fishers are Samals, who utilize fishhooks, spears, and other fishing handiworks, and on certain occasions net for small kinds of fishes. Corral is also of common use for fishing throughout Mindanao, although the Moros of Jolo do not consider it as a principal fishing instrument.

There are available monthly in many islands of Zamboanga and Sulu, especially in Sitangkai, hundreds of sacks of dried and salted fish, which are sent to Davao and to Visayan Provinces, where they find ready market. If there exists, however, an organized capital to undertake this industry, especially in the salting of fish, improving the methods at present employed, undoubtedly this industry may be developed in great scale, obtaining, by the improvement of quality, better price for the product. The fishing industry has great importance as forming a part of the food problem, and at the same time promises good return to those engaging in it. To propagate its importance by awakening the interests of capitalists and conducting campaign for the improvement of the methods at present used should now be one of the principal works of the Government in this matter.

COMMERCE AND SHIPPING.

Commerce in Mindanao-Sulu has received stable backing with the organization of the Zamboanga Oil Co., which has commenced operations during the middle part of the year 1918. This corporation is capitalized with ₱1,000,000, and, although its principal object is the manufacture of oil, it will nevertheless engage in general commerce. This company represents several powerful business firms of Manila, and its central office is in Zamboanga.

Notwithstanding the European war, commerce has continued to flourish, there having been registered various activities in other pursuits; and we may thus call the year 1918 as a "good business year."

The increase, however, in agricultural and industrial production, as well as in the output of the lumbering industry, on the one hand, and the European war, on the other, gave rise to transportation difficulties, there having been registered in some places and at certain periods of the year cargo accumulation which required the use of radical measures on the part of Government authorities.

The Department has continued the operation of the coast guards *Tablas* and *Mindanao* for general freight. For the transportation of laborers and general cargo between Cebu, Zamboanga, and Davao, the steamship *Marinduque*, of the bureau of labor; the *H. I. R.* and the schooner *Mustavit*, of Mr. Vicente Lozada, have been rendering services. The steamship *Imam*, of the Basilian Lumber Co., as has been agreed upon in its sale by the Government, has also been engaged in passenger and freight transportation between Zamboanga and Cebu and other points of Mindanao. The firm of Fernandez Hermanos, of Manila, has kept three vessels—the *Isas Filipinas*, the *Neil Macleod*, and the *Fernandez Hermanos*—on the Manila-Davao run and intermediary ports, and the *Romulus* from Manila to Jolo, via Zamboanga, these vessels making two trips monthly. The firm of Atkins, Kroll & Co. have also been operating their sailing boats, provided with auxiliary motors, in the carrying of merchandise to different ports of Mindanao-Sulu, and this has proven of great help to small dealers and producers.

The steamship *Dalupaon*, of the Pacific Commercial Co., makes its trips to the northern part of Mindanao, and the *Misamis*, of the Visayan Refining Co., and three or four schooners provided with auxiliary motors are engaged in traffic along the coastal towns where vessels of major tonnage do not call.

Toward the month of March the firm Francisco Barrios & Co. sold their vessel *Antipolo*, which was running between Sitangkai, Cagayan de Sulu, and intermediary ports from Zamboanga, but this run has been taken later on by the steam launch *Research*, which was administered by the Province of Sulu and devoted to general traffic between the Island of Jolo, Zamboanga, and Cotabato. During irregular periods of 1918 voyages to Mindanao-Sulu

were made by the steamship *Pelayo*, of the Visayan Refining Co.; the steamship *Vigan*, of the Compañía Mercantil; the *Quantico*, *Liscum*, and *General Weeks*, which, through the efforts of Gov. Carpenter, have relieved the accumulation of abaca in Davao and the congestion of lumber in Lebak and Port Banga. I believe that on various occasions the schooner *Fookien*, of considerable tonnage, towed by the coast guard *Gilbert*, has also called to take a cargo of lumber. The large vessels of the N. Y. Kaisha, plying between Japan and Australia, have also called at Zamboanga once a month with general cargo, and the English steamships *Selangor*, *Po Ahn*, and *Krian*, of the Singapore and North Borneo Line, carrying general cargo, visit Zamboanga and Jolo every 17 days. On two occasions, I believe, schooners of considerable tonnage, with an auxiliary motor, have carried hundreds of tons of copra from Zamboanga to San Francisco, bringing general cargo on return trips.

Notwithstanding the existence of these vessels there has been noted, as mentioned above, an accumulation of products in some localities, and commerce would have been greatly increased if the shippers had the complete assurance that their merchandise could find immediate adequate shipping facilities.

The trading system as a business enterprise has also proved a success, aside from the fact that it has been one of the factors which has stimulated and given impulse to interior commerce by utilizing forest products having commercial value, and has thus contributed in the extension of Government control and in making possible the collection in greater proportion of the cedula and land taxes.

Exports and imports.

Province.	Total value of exports.	Total value of imports.
Agusan.....	P2,029,295.93	P1,715,000.00
Bukidnon.....	501,700.00	78,750.00
Cotabato.....	448,800.39	419,041.91
Davao.....	11,080,000.00	5,225,358.00
Lanao.....	92,756.92	338,000.39
Sulu.....	3,215,203.03	2,914,942.40
Zamboanga.....	3,285,057.36	1,201,548.00
Total.....	20,652,813.63	11,893,331.90

MANUFACTURE.

The principal industry in Mindanao is lumbering, and, as I stated under the head "Forestry," there are at present in Mindanao 11 sawmills in full operation, their output during the year being 64,535 cubic meters of lumber. Apart from the work of the big lumber factories, there also exist small concessions engaged in the cutting and export of lumber from near-by places for local use only. In the island of Tawi-Tawi the manufacture of ties for use of the railroads in Manila is acquiring importance. On several occasions the steamship *Romulus*, and about the month of December the *Kaponka*, a vessel of considerable tonnage, called at this port for these ties.

The Zamboanga Oil Co. is now completing the construction of their buildings at Caldera Bay, where they are at present installing their plant for the manufacture of oil. It is expected that this factory will soon commence operation, and it is believed capable of milling about 22,000 piculs of copra monthly.

The manufacture of tiles for roofing, as an advantageous substitute to that of iron, is also acquiring no small importance in Zamboanga. Actually in the barrio of Santa Maria there is being built a spacious warehouse by a corporation which will engage on a big scale in the manufacture of tiles for roofing and other purposes.

There exist also in the Department of Mindanao and Sulu small horseshoe shops and carpentry and other shops for the manufacture of furniture, handiwork, hats, mats, and other articles of local and ordinary uses, but their production is on a small scale and does not yet deserve special mention in this report.

The industrial work in the public schools, such as the manufacture of furniture and other household utensils, is assuming rapid strides. The goods that are being turned out are of such quality that they always find demand and ready market.

BANKS AND CREDITS.

There has been no change in this line of activity with the exception of the establishment of a branch of the national bank at Davao, which is now conducting advantageous operations for the bank and for the planters in the Provinces. It is expected that the present agency at Zamboanga will be changed into a branch, and I understand that this matter is now receiving consideration on the part of the directors of the bank. In the capitals of the seven Provinces of the Department the national bank has agencies under the supervision of the respective provincial treasurers. There exist in Zamboanga a branch of the Bank of the Philippine Islands as well as an agency of El Hogar Filipino, and these are making loan operations which are helping in the material development of the Province. The Zamboanga Mutual Building and Loan Association also operates in Zamboanga, giving loans with reasonable terms.

IMMIGRATION.

As stated in the increase of population, I reckon that only some 12,000 Filipino immigrants have come down to Mindanao during the year 1918. From this number, 8,771 have been sent down under the intervention of the bureau of labor, and almost all laborers were allotted to Davao, Zamboanga, and Agusan. The rest is composed of laborers contracted for the National Coal Co., other private enterprises, and small property owners who came down from the Visayas Islands to northern Mindanao in search of land and a better future.

It is a fact that immigration is one of the principal factors which solves the so-called Filipinization of the Mohammedans and pagans, who form the greatest number in Mindanao and Sulu and who also are an element of material prosperity. Even though this matter was carried on completely under the control of the bureau of labor, the Department of Mindanao and Sulu during the year 1918 has put forth all necessary efforts to assist the said bureau in attaining its desired purpose.

In the middle part of the year several families from Batanes were brought down to Bukidnon, and 23 heads of families from Iloilo, a total of 125 persons, went to Basilan. Several families also went during the year from Ilocos to Cotabato. With the exception of those from Iloilo, the homeseekers have not obtained any help from the Government except their transportation. The immigration of middle-class families with an initial capital of ₱500, at the least, each, is giving good results. They are ordinary working people, with faith in their future in Mindanao, and are not easily discouraged over the hardships which are always encountered in the first years. They form a firm foundation for stable, permanent settlements of future independent landowners. I have observed that it is difficult for a simple laborer who is dependent solely upon his daily wages to accumulate sufficient capital for his future use even in spite of his desire to save. They see that after having worked for one or two years there remain scarcely no savings. It is true that there are some, very few, who have succeeded in opening up and caring for their homesteads, but these are exceptions. The majority remain the same without any hope of better prospects.

The first difficulty to be met with by middle-class families is the transportation. Those who come down from Ilocos, Iloilo, Bohol, or Antique do not want to spend anything from their meager but hard-earned accumulations of capital to pay for transportation between their Province and the ports of call at Cebu and Manila, where the Government boats usually stop. This fact constitutes one of the main obstacles. In case it is not possible to call at convenient ports regularly, it might be well for the bureau of labor agency for recruiting laborers in the Provinces to make propaganda in order to invite middle-class families and arrange their transportation in Government boats at any time when a sufficient number of them justifies a coast guard to stop in a port.

In opening up any new country the success depends upon the kind of people who go there to develop it. In Mindanao and Sulu the chief problem is to get industrious people from rural districts to settle upon the immense unoccupied areas of fertile land. It would be worse than useless to have immigrants come here from urban communities, even though they paid their own transportation, but it would be equally a sane, practical, paying business proposition for the Government to spend money to advertise for successful small farmers to occupy the lands being divided into homesteads and to pay their transportation from

their present home to their future home. The small cost in this item of transportation would be returned in a few years in land taxes paid, proportion of internal revenue, and customs duties on products, to say nothing of the relief of congested districts where the population has nearly reached the point of saturation. The immediate increase in the wealth of the country must also be considered. It furnishes a direct means for increasing the population by freedom from crowding. It is well known that in a new country the births are more and the deaths less than in congested areas, due to the greater opportunity offered in the productivity of the soil in proportion to the struggle. One must not lose sight of the tactical advantage in establishing families from the northern Provinces in these places if it is hoped to secure a homogeneous people throughout the Philippine Islands.

During the year a plan has been partially worked out by an harmonious arrangement between the Department and the bureau of lands whereby intelligent and specific location may be made of homeseekers in desirable, fertile areas easily accessible to means of communication. Once a large area is ascertained to meet all the requirements, a certain portion is set aside for subdivision into 16-hectare lots for homesteading or individual purchase. Other portions of this land are set aside in convenient units in juxtaposition to the homestead lots for plantation sites. Effort is made in advance to secure men with sufficient capital to apply for these portions of land and begin development thereon. Once his capital and operations are assured, a descriptive pamphlet with photographic reproductions is prepared and translated into Ilocano, Tagalog, and Visayan dialects, with a view to make potential homeseekers acquainted with the country by sending those pamphlets into congested districts. At the same time the bureau of lands orders the subdivision of the lands into homesteads ready for the homeseekers who may arrive. The surveyors on the ground show the arrivals the corners of the land, help them to make selection thereof, and assist in making out the proper applications to protect them in their rights. By this arrangement employment is offered the homeseekers on the adjacent plantation to the extent he may desire. The plantations furnish the capital, in the form of wages, and give the homeseeker the opportunity while working thereon to observe modern methods of farming. The plantations are assured of a reasonable supply of labor in the vicinity to develop the enterprise. Both are mutually helpful. It has the great advantage in making it possible for a poor man with only ₱100 accumulated savings to build himself a home. The potential number of homeseekers is thereby largely increased. It concentrates effort upon one place and very quickly establishes social communities, without which no successful results can be achieved. It is firmly believed that this method is the correct one, and much is hoped from its growth. It will solve the political problem by extending the Christian settlements; it will relieve the congestion of people in the northern Provinces; it will increase the population, not only here but of the islands, more rapidly; it will give a tremendous impetus to the economical development; and it will at the same time increase the material wealth of the islands and the well-being of its inhabitants. No cost is attached to it but the transportation, and experience in the United States in settling the West showed the wisdom of providing nominal rates or free transportation to enterprising individuals, and we incur no greater risk here.

MISSIONS AND OTHER PHILANTHROPIES.

No notable changes may be mentioned under this heading. The bishopric of the Roman Catholic Church, of Zamboanga, has continued the operation of the Pilar Hospital; and the Episcopal Church Mission, the Zamboanga Hospital. These two institutions are carrying on in Zamboanga charitable work of vital importance.

Besides the above, the Episcopal Church Mission conducts the Moro Settlement House, which has come to be an educational center for Mohammedan girls and the Sulu Press, a monthly magazine written in Arabic, which contains instructive reading matters for the Mohammedans. Under the auspices of this same mission there is being maintained at Camp Indanan, Jolo, a farm school, opened in 1916, which is doing the Moros great good along educational lines.

There exists also in Zamboanga the Christian and Missionary Alliance, under the direction of Rev. David O. Lund, which, besides the religious services, conducts schools in Zamboanga, Margosatubig, and Lamitan, the last

one having been handed over to the Government. In Zamboanga there have been enrolled 81 girl students, 64 of whom were boarding pupils and 17 day pupils. Of these boarding students 23 receive gratuitous training and the 41 are pay students. This school is located in Tetuan and the premises are being continually enlarged, conditioned upon the requirement of its constant development.

The Congregational Mission in Davao is also undertaking notable charitable activities. It has a hospital and is conducting schools. It has branches, I believe, in Cagayan de Misamis and Surigao, where they engage missionaries in their religious work.

The Jesuits are also maintaining schools in almost every town where their mission is located, and the congregation of the Sisters of Charity of the Society of Jesus has also established colleges in Zamboanga, Davao, Cagayan, Agusan, Surigao, and other points of Mindanao.

There has been observed during the year mutual tolerance among the different religious institutions, and not an incident has ever been recorded that would stain their harmonious and amicable relations.

There also exists in Zamboanga what is known as "Centro de Puericultura," a society engaged in philanthropic work, composed almost exclusively of women, and which has for its object the protection and proper care of children. The local branch of the Red Cross Chapter has been very active in its work. During the year 1918 through its efforts was largely due the success of the recent campaign for the collection of contributions for the war.

POLITICAL CONDITIONS.

No change of any importance has been noted under this heading that deserves mention in this report. There has been no legislation enacted that would cause even a slight change in the organization of 1917. There has been noted, however, a certain tendency on the part of the leaders of some localities to strive for the highest political privileges, as in the election of municipal presidents, but such a movement has been obstructed by reason of the inability as yet of the majority of the inhabitants to take part in these elections. During the last months of 1918, the barrios of Manicahan, Mercedes, and Bolong have solicited separation from Zamboanga so as to constitute an independent municipality. This desire, however, has not been attained for financial reasons. In the northern part of Zamboanga there have also been noted movements in the towns of Dapitan, Dipolog, and Lubungan which tended toward the separation of that section from Zamboanga and its inclusion to Misamis, which movement has been supported by Senators Capistrano and Clarin, who, through a bill presented before the senate, requested this separation. The matter is, I believe, before the consideration of the legislature. My sincere opinion, however, is that these places will suffer greatly by separating themselves from Zamboanga, as in so doing they will no longer enjoy the financial assistance and other benefits which are given them.

PERSONNEL.

At the close of the year 1918, the personnel of the Department of Mindanao and Sulu is as follows:

PERSONNEL OF THE DEPARTMENT OF MINDANAO AND SULU.

Department Officials.

Department governor	F. W. Carpenter.
Department secretary	Teopisto Guingona.
Assistant secretary and acting department treasurer	Juan Posadas, jr.
Delegate	Doroteo Karagdag.
Department attorney, acting	Delán Jaranilla.

Provincial Officials.

AGUSAN.

Provincial governor	Rafael Acuña.
Secretary-treasurer, acting	Lorenzo Pallio.
Third member, provincial board	Juan Corvera.

BUKIDNON

Provincial governor	Manuel Fortich.
Secretary-treasurer	Jose Agudo.
Third member, provincial board	Faustino Abello.

COTABATO.

Provincial governor	C. B. Carter.
Secretary-treasurer	Jose M. Unson.
Third member, provincial board	Datu Ampatuan.

DAVAO.

Provincial governor	Francisco Sales.
Secretary-treasurer, acting	Alfredo Zamora.
Third member, provincial board	Antonio Pichon.

LANAO.

Provincial governor	T. W. Coverston.
Secretary-treasurer	Elias M. Ataviado.
Third member, provincial board	Amal Manabilang

SULU.

Provincial governor	Paul D. Rogers.
Secretary-treasurer	Francis L. Link.
Third member, provincial board	Julius Schuck.

ZAMBOANGA.

Provincial governor	Agustin L. Alvarez.
Secretary treasurer	Ild. Coscolluela.
Third member, provincial board	Awkasa Sampang.

With the exception of some officials, for whom on opportune occasions the corresponding report has already been sent, the entire personnel of this Department have continued during the year rendering in their respective positions excellent work, demonstrating mature experience, ability, and devotion to duty, and are subordinating their personal interests to those of their official duties.

The selection of personnel especially for positions of responsibility is fundamental, because upon it depends those conditions which determine the advancement or retrogression of a Province in its varied spheres of existence. But, in this connection, permit me to quote hereunder what Gov. Carpenter has stated in his annual reports for 1916 and 1917, which is a clear portrayal of the real significance of the question. I, who have had the opportunity to be away in isolated regions, and saw with my own eyes the dangers, and having placed myself in a position as to allow me to judge of the situation, feel myself justified to mention the facts disclosed in the following paragraphs, which are of current application:

"It is with increasing and very great difficulty that competent men are secured for appointment in the public service here. The work in all branches of Government in Mindanao-Sulu is of a constructive rather than routine character; there are involved in the service not merely constant personal sacrifice of the conveniences and social life of the Provinces of Luzon and the Visayas, but the positive hardships of travel and life in the jungles of swamps and mountains, and even the provincial capitals are remote, and in but infrequent mail communication with the rest of the world. The natural hesitation or unwillingness of competent men to give up assured employment and prospects in their home communities for the venture of service in Mindanao-Sulu is accentuated by the popular fear of encountering material hostility and probably violence among Mohammedans and pagans as it naturally is not possible entirely to dissipate the established popular convictions and traditions of recent years and past generations in Luzon and the Visayas as to the attitude of the people and conditions in Mindanao-Sulu. Furthermore, the lack of provision for Government officers and employees who become permanently invalidated by reason of disease or injury contracted in the public service logically deters many of the best type of men in the public service or private occupations in Luzon and the Visayas from entering public service here, and this

is augmented by the fact that the salaries which may be paid here do not enable a man with wife and even not more than two or three children dependent upon him to provide against the contingencies of death or invalidism by salary savings. A certain type of inexperienced or otherwise incompetent individuals, of course, may easily be secured, even at materially reduced salaries. But with such personnel it will be impossible to accomplish the economic and political purposes of Government here, and the contribution which this by far the richest one-third of the archipelago may and should make to the national wealth and homogeneity will indefinitely be delayed and, indeed, endangered.

"It is not only with reference to the higher administrative positions but equally true regarding subordinate positions in all branches of Government service within non-Christian territory that increasing difficulties are encountered in securing and retaining competent men. Not only is the service unattractive as compared with other branches of the Government by reason of station at remote points, the hardships of field work, the unavoidable requirements of longer hours and greater intensity of application to official work, in many instances the nervous strain of recurring delicate public-order situations, and other distinctive circumstances peculiar to this service as compared with service in the city of Manila and in the regularly organized Provinces, but also the great phenomenal developments in agriculture and commerce offer in private employment or individual private enterprise materially greater compensations. Government is obviously greater in the extent of its organization and diversity of demands upon the abilities of its personnel than is any private corporation or individual agricultural, commercial, or industrial enterprise. It is apparent that if the Government is to be administered and served with efficiency comparable with that of good private business, which the taxpayer as a stockholder in the public corporation, which is the Government, has an undeniable right to and sooner or later will demand, the best abilities and most efficient, honest services available should be secured and retained to the Government. This is true for the same fundamental reasons which cause well-managed private corporations to seek for and hold in their services the best obtainable personnel for their purposes. Unfortunately, the results of the great public corporation (the Government), unlike private corporations, may not be stated in terms of periodical cash dividends to the stockholders (taxpayers). The dividends are in the form of the public services maintained and offered to the people. It is, indeed, unfortunate that the taxpayer does not yet demand and exact the degree and quality of those services to which he is entitled, and oftentimes, through lack of understanding and appreciation of the fundamental elements essential to satisfactory and beneficial service, the public mind is misled to demand the fixing of compensations of public servants at rates lower than the market price established by private employers for similar grades of ability and capacity to serve. Specific cases which occasion the foregoing comment are the payment of a private corporation for services in a subordinate capacity in a single industrial establishment in the Philippines of a higher rate of compensation than the maximum which may be paid to the chief executive of the Government of a Province whose territorial extent is greater than was that of the Kingdom of Belgium and involving corresponding constructive and administrative ability; the offer of higher rates of compensation for resident managers of individual agricultural plantations than the maximum which may be paid any provincial governor or provincial treasurer; the offer of higher rates of compensation to chief clerks, stenographers, and bookkeepers by private agricultural, industrial, and mercantile enterprises than may be paid employees of these grades in the public service in non-Christian territory. The foregoing facts, in confirmation of which numerous specific instances may be cited, are submitted as important pertinent information which might otherwise not come to the attention of higher authority."

Although Gov. Rohrer appears to have been governor of Jolo until the end of the year, this position was, however, in reality occupied by Secretary Treasurer Rogers since July 5, 1918, at which time Gov. Rohrer left for Manila to assume the duties of major in the Philippine National Guard.

Mr. Hughes, until September 30, 1918, the date his resignation took effect, was occupying the position as assistant secretary and department treasurer. In his place, Mr. Juan Posadas, Jr., who proceeded from the treasury of Davao, has been named as a reward of his demonstrated ability and efficiency in the management of public affairs, especially along financial matters.

INSPECTIONS.

The undersigned, in the name of the Department governor, has undertaken many inspection trips during the year 1918, which almost covered the entire territorial jurisdiction of the Department of Mindanao and Sulu, including the remote islands of Sitangkai, South Ubian, Cagayan de Sulu, the Pacific coast and the interior dividing line between Lanao, Bukidnon, and Cotabato. All provincial capitals, important towns, and localities which have few inhabitants but require attention for the problems they offer both to public order and other aspects of administration, etc., have not been neglected. These trips have been arranged with those of other officials of the various offices of the Government, as the Department commander of the Philippine constabulary, the Department superintendent of schools, the supervising engineer, and the local representatives of the bureaus of customs, forest, health, internal revenue and lands, and have been taken during the year throughout the Department of Mindanao and Sulu, at the same time said officials made their inspections.

Almost all of the provincial governors, in compliance with the instructions of this office, have also spent the greater portion of their time in inspection trips within their respective territories, apart from the corresponding inspections performed by their deputy governors.

Gov. Carpenter, as director of the bureau of non-Christian tribes, has spent a considerable length of time during the year in the inspection of the Mountain Province and Nueva Vizcaya, besides the other trips which he performed in Mindanao-Sulu.

During July 30, Vice Gov. Yeater has also taken a trip of inspection in Mindanao-Sulu, visiting Jolo, Zamboanga, Cotabato, Davao, Bukidnon, and Lanao. With the vice governor came the director of education, the director of forestry, and other high officials of Manila. Director of Prisons Dade also visited Zamboanga on December 12, 1918, to inspect the San Ramon penal farm and other activities of his bureau.

CHRISTIAN, MOHAMMEDAN, AND PAGAN RELATIONS.

The friendly and otherwise harmonious relations existing between Christians, Mohammedans, and pagans have continued and progressed to such an extent that from time to time there have been noted more intimacy and more confidence in their treatments among each other and more tolerance in their religions and beliefs. This intimacy has been greatly apparent, especially in Cotabato, where Mohammedans and Christians are united in ideals and sentiments and are unconsciously erasing that unifying legend, "Moro-Moro," an invented story, in which bitter enmity between each side is exhibited. However, we can not yet say that the problem has ultimately been solved. There is yet much to be done in this regard. This social vice has existed for centuries, and the few years that have transpired have not been enough to completely erase the traces of this social prejudice.

RECOMMENDATIONS.

Before making specific recommendations I desire to quote herewith the following paragraphs appearing in the report of Gov. Carpenter for the year 1916, which give light, in clear terms, as one of the fundamental problems in the Department of Mindanao and Sulu:

"The following recommendations are premised upon the experience of past years and careful consideration of the relation of apparent urgent present needs to eventual results in the public interest so far as now possible to anticipate, and are limited to matters requiring legislative action. The creation of fundamental conditions assuring, so far as humanly possible, permanent stable government is taken as the objective of controlling importance. The present generation of Mohammedans and pagans is now disposed to peace and loath to incur liability of further punishment by the armed forces of Government. The boys of school age of to-day will within a few years be the men constituting the controlling factor for or against peace and good order under whatever may then be the constituted government. If the fathers become in the near future permanently located on their own land, with documentary evidence of ownership, which is more highly prized by the native of Mindanao-Sulu, if possible, than by the native of the northern Provinces or the American farmer, and if the children of to-day be given the school opportunities their parents desire for

them and to which they are morally entitled from the Government, the expenditure of the large sums of Federal and insular funds and the great sacrifices of lives which have been made in Mindanao-Sulu during the past 18 years will not have been in vain, *nor will they have to be made anew*. If, however, Government administration here be dependent wholly upon inadequate insular aid and the exceedingly meager present revenues of the as yet embryo provincial and municipal governments, then in less than 10 years from now, when a new generation, grown up without the civilizing influences of schools, proprietorship of land, the impress of public works, etc., and without the sad experience had by their fathers of the chastisement administered to disturbers of the public peace, and will have come into control of public opinion in this region, the maintenance of public order will again present problems requiring large expenditures of lives and public funds by the armed forces of Government. Then, whatever there has been of progress in the accumulation of wealth, the social betterment of the people, and other benefits of civilization will inevitably in great part be destroyed. Previous years may be considered a period of trial of theories and the ascertainment of what is feasible and most productive of desired results. The Governor General and legislature have wisely and liberally provided aid from the insular treasury for the past three years of this period of investigation and experimental effort, and this liberality in material aid has been the convincing argument beyond the greatest potentiality of mere words in winning the confidence and cooperation of Mohammedans and pagans. This confidence and cooperation given by those formerly suspicious and hostile elements of native population have been expressed in material form not only in formal submission to Government and obedience to law, but by the payment of taxes and other Government dues, voluntary relinquishment of equitable rights to land required for public purposes, contributions of materials and labor without compensation to the construction of public buildings, trails, etc., and especially in the unstinted expenditure of strength, time, personal influence, and resources in assisting the Government to convince recalcitrants and apprehend outlaws. The present time is the most opportune for constructive work. And for this, adequate appropriations of insular funds must be made to supplement local provincial and municipal revenues if the progress already made be not lost and the greatest eventual economy to the insular treasury be given due consideration. Public order, present and future, and consequent political and economic advance may best be assured by due extensions of primary schools, surveys, and documentation of privately occupied public lands, and the giving of impetus by encouragement and direction to immigrant agriculturists from the northern islands and Provinces. Of the total sum available for appropriation from the insular treasury for aid in support of public instruction below the university grade at least one-third should be devoted to Mindanao-Sulu, including the contiguous Provinces of Misamis and Surigao, which comprise some non-Christian or backward population. If this be done for a period not exceeding five years, and coincident therewith there be legislative and executive action duly facilitating definition of private ownership of land and agricultural development, the Provinces of Mindanao-Sulu may then, without prejudice to the general interest of the entire archipelago, be placed with the regularly organized Provinces on a per capita basis in the distribution of insular aid to primary schools, as local school revenues may by that time, through the facilities indicated for the development of revenue from the land tax, be able to bear their proportional share of expense of school maintenance on approximately equal footing with the other Provinces of the archipelago. The experience of past years permits no other conclusion than that, here as elsewhere, efficient primary-school instruction for four years is the great bulwark of public order and best foundation of the type of citizenship which is the national ideal and essential to the creation of stable democratic government.

"The following specific recommendations are respectfully submitted:

"(a) That insular financial aid in the sum of ₱1,000,000 be appropriated annually for a period of at least five years for the extension and maintenance of primary schools having as their chief objectives appropriate instruction in agriculture, industries, elementary commerce, and the duties and rights of citizenship throughout the territorial jurisdiction of the bureau of non-Christian tribes (40 per cent of the land area of the Philippine Archipelago).

"(b) That insular aid in such sum as the director of lands may report that he can economically utilize to secure the necessary technical personnel and other expense for public-land surveys to facilitate the permanent location of the people by the issuance of titles to free patents and other private acquisitions

of agricultural lands from the public domain under the provisions of the public-land laws; and in this connection that a definite program of direction and encouragement of persons to assure the orderly and otherwise advantageous exploitation of the best agricultural districts remaining in the public domain be authorized and carried out by the bureau of lands.

"(c) That the public-land laws be amended so as to compel, under penalty of forfeiture, the productive cultivation and exploitation of lands acquired by private corporations and individuals from the public domain, thus preventing the acquisition and holding of valuable agricultural locations for purely speculative purposes, without appreciable cultivation or other exploitation in the interest of the national wealth.

"(d) That existing law be amended to provide that neither free patent nor homestead titles may be mortgaged or alienated in any degree of the right of proprietorship without the prior favorable recommendation of the provincial governor and the approval of the director of lands in any case in which the owner in interest is unable himself to read intelligently a satutory form of the mortgage or sale document in either English, Spanish, or the local dialect, under penalty of forfeiture of the property to the State and imprisonment of the purchaser, of the notarial officer and witnesses before whom the mortgage or sale document, if any, of whatever kind, was accomplished. This is essential to prevent fraud being perpetrated on illiterate persons and the privation of the non-Christian and other backward peoples of their land, the gradual creation of unduly large areas of individual ownership, and the forcing back to the mountains or into the large centers of population of large numbers of the less intelligent elements of the people, with the consequent grave menace of agrarian troubles. This is now in effect the law in the territory formerly the Moro Province, and is the only apparent method of preventing the simple-minded illiterate, especially the Mohammedan and pagan, from being defrauded of the most valuable fruit of his labor and forced to return to the mountains or to become a vagabond in the lowlands.

"(e) That there be adopted a definite, comprehensive plan for the distribution of population by the transfer of the surplus from densely populated districts to advantageous agricultural locations on public lands under appropriate direction, with coordinate activity by the bureau of lands, agriculture, and labor; that the sum of at least ₱250,000 per annum for a period of five years be appropriated from the insular treasury to meet the expense of propaganda, free transportation of emigrants and their families, and such further assistance, if any, as circumstances in special classes of cases may warrant in the public interest.

"(f) That the sum of ₱500,000 be set aside annually from the insular treasury for a period of five years to carry into effect a program of economic development by means of agricultural colonies so located as to open up and eventually attract a current of unassisted immigration to important highly fertile agricultural regions, which it has not been possible otherwise to bring to the favorable attention of the public.

"That the National Development Co. invest money in Mindanao by purchasing the plantations that are being sold and will be sold here in the future, by fomenting agriculture and the cattle industry, and by undertaking the exploitation of its oil and iron mines, etc.

"That the Government continue its efforts toward securing railroad materials used in the war or obtain such cheap materials through other means with the object of establishing railroads in Mindanao, and adopt them in place of the construction of the present roads, which will in the end prove more costly than the railroads.

"That in case the ₱500,000 recommended in paragraph (f) can not be secured, there be appropriated every year the amount of ₱50,000, to be expended for the absolute necessities of the colony. The success of a work depends upon the measures employed, and in the absence of these the work which would otherwise be productive under other circumstances is bound to be a failure.

"That a law be enacted prescribing the conditions and requisites under which a Mohammedan marriage may be considered legal before the law.

"That a law be enacted authorizing justices of the peace of provincial capitals to exercise jurisdiction over interlocutory cases in the absence of the judge of court of first instance.

"That a court of first instance be created in a judicial district to be formed by Davao and Cotabato, Davao to be the residence of the judge.

"That a law be enacted establishing a system of insurance in which the employer pays certain premium for the insurance of the advances which he makes to the laborer.

"That the legislature, by joint resolution, adopt a program of stated amounts or definitely fixed proportional appropriations for the completion of the extension of Government control and economic development in non-Christian territory, by which these provincial governments shall be brought within a period of five years, or such other period as the legislature may decide to be feasible and more desirable, upon a basis of economic independence in the sense in which the regularly organized provincial governments are self-supporting, thereby terminating appropriations in special aid of the non-Christian provinces."

This paragraph is taken from the annual report of Gov. Carpenter for the year 1917, for the reason that I consider this recommendation extremely necessary as a definite program of the situation of Mindanao-Sulu.

Respectfully submitted.

TEOPISTO GUINGONA, *Acting Governor.*

The DIRECTOR BUREAU OF NON-CHRISTIAN TRIBES,
Manila, P. I.

REPORT OF THE SECRETARY OF PUBLIC INSTRUCTION.

JANUARY 1 TO DECEMBER 31, 1918.

DEPARTMENT OF PUBLIC INSTRUCTION,
Manila, P. I., April 19, 1919.

To his excellency the GOVERNOR GENERAL:

Pursuant to the requirements contained in the Administrative Code, I have the honor to submit the annual report of the department of public instruction for the calendar and fiscal year of 1918, and to transmit therewith the annual reports of the respective directors of the bureaus of education, health, and quarantine service, and also the report of the superintendent of private schools.

BUREAU OF EDUCATION.

Speaking generally, it may be said that unusual progress has been made during the past year along many lines in the bureau of education. One of the most important and far-reaching events in the legislative history of the islands was the passage by the legislature of Act No. 2782, entitled "An act appropriating the sum of ₱30,705,824 for the extension of free elementary instruction to all children of school age." Under the provisions of this act the sum mentioned in the title is made available in amounts specified, increasing gradually through a period of five years. Besides carrying the boon of free education to all the children of the islands this act will result in increasing the salaries of teachers at least 30 per cent before the close of the five-year period. Furthermore, in connection with other legislation passed at the recent session, it does away with the unfair burdens imposed upon the parents of children through tuition fees required for the enjoyment of the advantages of the public intermediate schools. This class distinction will be now forever abolished and all the children of the islands will have the privilege of free attendance in all the schools. This act will provide for the education of the masses and, laying the necessary foundation for a democratic form of government, will tend to assure in the future the permanency of free institutions in this country. It is now universally recognized that the stability of every free government must be based on the schoolhouse. The act mentioned will always redound to the credit of the members of the legislature, who gave it unanimous support in both houses. Their names will ever be held in grateful reverence by the people of the land and by posterity.

As a matter of course the disbursement of this fund and the administrative work and the preparation required in advance for its proper execution is a most serious, difficult, and complicated task. Upon the recommendation of this department, particularly of the bureau of education, the appropriation was spread over a period of five years. This was made necessary because from the very nature of the case it would be absolutely impossible to expend properly and to the best advantage such a large sum in less time than the period fixed of five years.

With reference to the teaching personnel, it will require much effort to obtain the increased number of teachers which will be required by doubling the number of school children to be taught. With existing facilities and the limited number of normal schools in the islands, of which only one is in complete operation, many teachers must necessarily be employed at first who will be far from filling ideal requirements. In the next place difficulties in securing proposed sites and in erecting buildings must be encountered under the existing land tenure system, and, in addition, the method of registration here will cause much delay in securing school sites, the title to which must of course be perfect. Furthermore, the construction of buildings, particularly permanent buildings, requires considerable time, not only because of the fact that the

standard buildings erected by the bureau are of concrete construction, and hence consume much time in the process of building, but, in addition, the bureau of public works, which must handle all the work, is very much overloaded with other public buildings under construction and to be constructed for which pressing demands exist, and is also very much lacking in the number of engineers and architects required for the work of that bureau.

In many barrios, due to the zealous desire of the people, schoolhouses have already been erected, but up to this time there have not been sufficient funds with which to equip them and furnish teachers. Manifestly, for the sake of economy and in due recognition of this desire for education, the department will look favorably upon such localities, and in the majority of such instances will reward such self-sacrifice by establishing the first new schools in such schoolhouses already erected. Furthermore, there are many other barrios and municipalities which will be just as eager to furnish at their own expense schoolhouses of temporary construction, and it is now the intention of the department and the judgment of the council of state that, everything else being equal, preference should also be given to communities of this class. So it has been thought, in order to rapidly carry to the people as much of the benefits of this act as is possible during the first year, in which naturally the organization for extension can not be fully completed, that the best and earliest results can be effected by taking advantage of buildings already erected and of those that will be gladly erected by the various communities mentioned. This will enable a considerable number of buildings to be available during the first year and will give time to the bureau of education to prepare for the several thousand more school buildings which must necessarily be erected during the remaining four years of the period fixed.

NORMAL SCHOOLS.

There is in reality only one normal school in full satisfactory operations in the islands. This school was located in Manila in the year 1901 and can be expected to turn out in coming years from 300 to 400 graduates each year, and possibly an increase over that number. Inasmuch as that would only supply about 3 per cent of the total annual requirement for teachers, it is manifest that a number of other normal schools must be established and put in operation as soon as possible. This policy has been recognized by the legislature in the session of 1917-18. The secretary of public instruction was authorized to locate two new normal schools, and money was appropriated for beginning the buildings thereof. These schools were duly located in the city of Cebu, on the Island of Cebu, and in Laoag, Ilocos Norte, in the northwestern part of Luzon. Work has been begun in the construction of permanent buildings for these institutions, and at the same time beginning classes have been established in the adjacent high schools, so that by the time the buildings are completed and fully equipped there will be at least second, if not third, year classes in course of instruction. At the last session of the legislature, 1918-19, another appropriation was made for the establishment of two additional normal schools and the sites required therefor, to be located in the judgment and discretion of the secretary of public instruction. Accordingly, Iloilo, in Panay, and Albay, in Albay, in the southeastern peninsula of Luzon, have been selected as the sites of these two normal schools. At both these last-named places the respective Provinces in which they are located have agreed to make liberal contributions. In Iloilo this contribution will be largely used to purchase a site of 20 hectares directly opposite the high-school site. The United States Government will probably donate the grounds used at Albay as a military reservation, formerly known as Regan Barracks, for the site of the normal school located there. These grounds comprise about 80 hectares and have an excellent water system. The contribution made by the Province of Albay for the school will be used, in addition to that provided by the legislature, in the construction and equipment of buildings.

There was established two years ago a normal school at Zamboanga, and a beautiful main building is just being completed at a cost of ₱200,000. The school, however, is in the slow process of development and has little more than a mere paper existence as far as the number of actual normal students is concerned. This is due to the fact that there is no high school in Mindanao which has progressed far enough in the education of its pupils to qualify them for entrance into a normal school. Accordingly this building will be used first to develop the necessary material by means of the high school instruction and afterwards, when such material is prepared to enter the normal school, the

pedagogical instruction will begin. Until that time it can not be said as a matter of fact that the Zamboanga normal school has a real existence.

The fact that in the coming five years the school attendance under the act providing for universal free education will be at least doubled makes it clear that at least 14,000 new teachers must be required during the next five years for such added attendance. In this connection it must be considered that, owing to deaths, marriages, and transfers to other occupations, there will be required a necessary annual replacement. This replacement is estimated to be at least 20 per cent for all teachers, regular and temporary. Meanwhile, during this five-year period, the entire school population will be greatly increasing, and that increase, added to the present numbers now outside the existing schools, will require a total of at least 18,000 new teachers during the next five years. As a matter of course, to meet this great demand, it will be necessary to take all the graduates of the normal school at Manila, the number of whom will be negligible because so small, and to secure as many graduates as possible of the high school, which will probably meet 10 per cent of the demand, and to obtain the great majority of this body of teachers needed from students who have not yet completed the secondary course. It is therefore evident that from the necessities of the case the number of trained and well-educated teachers for the next 10 or 15 years will be comparatively small. It follows that it should be the educational policy of the country to continue the establishment and development of other normal schools. A very low minimum of the number which should be established would be one for every million of inhabitants, while an entirely adequate provision would require at least double that number.

AGRICULTURAL SCHOOLS.

The supervision of agricultural work in the bureau of education is vested in the superintendent of agricultural instruction, who devotes himself solely to this activity and who furnishes those in the actual teaching work such information and counsel as seem to him advisable. One marked feature of all the public schools, with very rare exceptions, consists in practical instruction given to the children in the work of gardening. Attached to each public school is a garden, in which various pupils are respectively assigned small plats and which they plant and cultivate under the immediate supervision of the teacher having charge of that work. In addition to that, the children are encouraged to also have, if possible, and with the consent of their parents, any such sufficient grounds as may be available to cultivate home gardens. Before this special work was inaugurated in the Philippines, vegetable gardens were practically unknown, and the people generally subsisted upon a very narrow diet, consisting largely of rice and fish and the native fruits. As a result of the persistent effort made by the bureau of education throughout the islands, tens of thousands of children during the past few years have received practical instruction in garden making, which in most instances they have carried back to their homes and parents. Now, throughout the country the people are generally beginning the cultivation of kitchen gardens, which increases the variety of their diet, adds to their health and strength, and reduces to a very considerable extent the expense of living.

Under the present practice of the bureau of education and for over 10 years, the children have been instructed and encouraged to plant fruit trees and shade trees as well as ornamental plants. A large number of the primary schools have developed small nurseries, and in some cases school nurseries have been established from which thousands of cuttings of ornamental shrubs and fruit trees have been distributed to the other schools. The number of school nurseries increased from 115 in 1915 to 1,201 in 1918. The number of fruit trees distributed in that period increased from 10,736 to 83,524, and the total number of trees and plants distributed increased during that interval from 41,126 to 159,030. After these distributions, there were reported to be at the close of the last school year, 190,986 trees and plants in the various school nurseries. In this connection, attention is called to the fact that Arbor Day has been observed annually since 1906, and in 1917 and 1918 the Governor General issued Arbor Day proclamations, designating the first Saturday in October as Arbor Day, and calling upon not only the children but public officials and all citizens to endeavor to carry out the objects stated in the proclamation.

The bureau of education is working along various lines, some of which can not be mentioned for lack of space, in its agricultural activities. There are now 138 agricultural schools, which may be classified as follows: Agricultural

schools, of which there are 9; farm schools, of which there are 12; and settlement farm schools, of which there are 117. In addition to this, there is the Central Luzon Agricultural School, at Muñoz, in which the methods adopted are very similar to those at Hampton Institute and the schools established by Booker T. Washington at Tuskegee. In December, 1918, there were 1,001 students enrolled in the Muñoz School, an increase of 256 over the previous year. The students represent 28 out of the 40 Provinces. The school itself is a center from which an influence for better methods and tools radiates to the surrounding country. The superintendent of the school gives his advice and assistance to the neighboring homesteaders, and they have organized a system of communal irrigation, also a credit association, and have cooperated in improving their domestic animals. The method adopted by the bureau in the operation of the agricultural schools is to establish, as a general rule, a school building and a dormitory upon a large farm suitable for the work intended. Such schools are therefore practically boarding schools and the pupils are selected and subsisted by the Government. These schools are all located in districts which are thinly settled, and they have greatly influenced methods of planting and cultivation and the opening of homesteads on the public lands in their immediate neighborhood.

The farm schools give instruction in the farm course to the boys and the housekeeping and domestic arts course to the girls, in connection with practical work for both sexes on the model farm ordinarily from 16 to 40 hectares in extent. These schools are day schools and seek to inculcate practical knowledge for the boys and to give home training to the girls in connection with farm life and the duties naturally incumbent on women on the farm.

Settlement farm schools are organized and operated as the centers of settlements, which ordinarily include a group of homesteads upon the public land in the immediate neighborhood of each school. These schools are open throughout the entire year, and the pupils who do practical farm work throughout the entire course spend half of the day in the classroom and the other half in work on the farm.

This system of agricultural instruction should be continually developed and extended until the whole possible field of work is covered. In connection with this development and extension there are certain economic facts which must be taken into account. The Philippine Islands constitute a land of vast but undeveloped agricultural resources. While the tropical products of the country constitute a considerable group of the world's necessities, their production may be said to be restricted, and the area under cultivation is not only limited but is tilted by antiquated methods, which yield inadequate returns.

A study of the situation reveals the fact that the islands may roughly be divided into agricultural districts based on the products raised. Thus, there is the tobacco district of the Cagayan Valley, the rice district of central Luzon, the sugar district of Negros, the hemp district of the Bicol Provinces and the Visayas, and the coconut district of Laguna and Tayabas. While many of these districts overlap and many others not mentioned are important to the economic welfare of the country, the fact that a limited number of products will be grown in a given district may be taken as a basis for agricultural development.

These facts have an immediate bearing on the solution of the problem of establishing a system of agricultural education throughout the Philippine Islands. It is not possible, for example, to grow hemp or coconuts at the agricultural college at Muñoz, which is situated in the midst of the rice district. Neither can practical instruction be given in many of the other staple products. A student who comes from the hemp district or from the sugar district can not be given instruction which will immediately fit him for service in his locality. During the past year, as stated, students were enrolled at Muñoz from 28 different Provinces. While book instruction was given, the students from many of these Provinces did not receive the practical training which would fit them directly for the particular agricultural work of their home Provinces.

There is only one satisfactory solution to this state of affairs, and that is to open up schools in all agricultural districts similar to the Central Luzon Agricultural School, at Muñoz, which will give specific training along such lines as count for the economic development of the surrounding district along with the necessary general agricultural instruction. There should be, in this sense, a tobacco school in the Cagayan Valley, a sugar school in Negros and perhaps another one in Pampanga, a coconut school in Tayabas or Laguna, and a fiber school in Leyte.

Experience has proved that such schools will readily become community centers for the agricultural development of a considerable area. An adequate system of agricultural instruction would necessarily mean a chain of such community centers, which would have for its purpose the economic development of the whole country as well as elementary textbook instruction for our future farmers. Many of the country's natural resources now lie dormant. They are undeveloped largely because the people are backward and also because of a lack of economic leadership. Communities in order to advance must make such improvements as tend to elevate the standards of life. A large number of agencies have been working toward this end for many years, and in most cases the conditions are favorable for constructive work along lines which will promote the agricultural welfare of the country. The 10,000,000 people occupying one of the world's most fertile areas constitute a great potential resource, but the great need is practical agricultural education and the resultant intelligent direction and control, so that the general development of the productive-land areas of the country may become an accomplished fact.

Without discouraging in any way the old educational systems of the past it should be noted that much of the training was given for the purpose of raising the individual above the ordinary in culture and intelligence. To shine rather than to serve was the motive behind the courses of study. The present trend has reversed this tendency, and the Filipino people now realize that the innovation is the salvation of the country. The educational system under the Spanish domination seems to have been fitted for turning out political leaders, but did not prepare them to be leaders in the economic development of the country. The establishment of a complete system of agricultural education would do more than anything else to remedy this defect.

At the present time the industries are outgrowing the personnel. In the sugar industry, for example, foreigners are used as field foremen, machinists, and factory overseers, at five times the salary received by Filipinos. There is no reason why Filipinos should not qualify for similar positions. This can easily be done if sugar schools are established in the locality where there are sugar centrals and if the educational authorities cooperate with the established industry in order to develop and train men for service in the field or factory. The same may be said of the coconut-oil industry and of tobacco.

Tremendous losses at the present time are occasioned by inability to accomplish many things which are necessary to the economic development of the country. In the vicinity of the Muñoz Agricultural College, for example, the adjacent stream if put upon the land would add to its value a minimum of ₱1,000,000 and would increase the annual production of rice a minimum of ₱2,000,000. This stream has so far, like countless other streams, been running in waste to the sea, and the country suffers from the consequent loss in rice production. In view of the fact that the country is annually facing a rice shortage when it should be a large exporter of rice, such a state of affairs should be remedied. To this end the students who are practically trained in rice cultivation and the simple methods of irrigation at the Muñoz school may be confidently expected to do their full part, and thus render a service of great value to the country.

TRADE AND SPECIAL SCHOOLS.

The Philippine School of Arts and Trades in 1918 enrolled 562 students. During the past year the construction of a new building for academic classes on the trade-school grounds to cost ₱300,000 has been begun, and it is expected that the building will be ready for occupation at the opening of the regular school year in June. The usual handicap of the scarcity of labor has been largely overcome in the erection of this building, since a large number of the students of the school have been engaged from the beginning in the work of its construction. This has set forward very much the completion of the work.

THE NAUTICAL SCHOOL.

In 1918 the Philippine Nautical School separated from the Philippine School of Arts and Trades. The nautical-school building was located in the southern part of the city, facing the bay, and was completed in July of that year, much of the work in the erection of the building and the residence for the superintendent having been done by the students of the trades' school. In December, 1918, the nautical school had enrolled 57 students. These students live in the school dormitory under the same discipline as that observed ordinarily on board

ships. Students are divided into watches, which are under the command of officers selected from the senior class, and they take regular turns in keeping the school dormitory in shipshape condition. The course of the nautical school provides for two years of work on the shore and for 18 months of apprentice work on board an interisland vessel. Many graduates of the nautical school are already occupying responsible and lucrative positions in interisland and trans-Pacific shipping vessels, and shipowners are very desirous of securing them when possible.

SCHOOL OF COMMERCE.

The Philippine School of Commerce is still in lack of a suitable building, and it is housed in rented quarters quite unsuitable for school purposes. Lack of space puts a limitation on the number of students that can be accommodated, and it is believed that in the event a legislative appropriation is made for the construction of a new building the enrollment would be doubled in a very short time. There is a one-year course in stenography, and this is open only to high-school graduates. In addition, the school offers a three-year course in commerce, a two-year course in bookkeeping, and a two-year course in stenography. Proficiency in English and arithmetic is required as a prerequisite for entry into either of the long courses. The demand for stenographers and bookkeepers has been such that it has been impossible in recent years to retain these students in the school until they complete their courses. However, arrangements have been made by which students who accept positions before graduation can continue their studies in the night-school classes conducted for five nights of each week, and this offers an opportunity to young men and women who are employed during the day to obtain a commercial education. It is a lamentable fact that the Filipinos are much behind their efforts along other lines in mercantile and commercial activities. Largely the retail mercantile business of the country is in the hands of the Chinese, and exportation and importation are in the hands of Americans and Europeans. To improve this condition and better enable Filipinos to participate in the business of the country, a number of schools of commerce should be established at the various commercial centers of the islands in order to train the youth of the land for business pursuits. Furthermore, it would seem desirable to maintain a commercial course in each of the four-year high schools in the islands. The bureau of education has already succeeded in substantially directing the minds of the coming generation to agricultural and industrial pursuits. It is hoped that the same success will be met in the near future in turning out sufficient young men and women who shall be qualified to begin business life and commercial vocations, and thus enable the Filipinos to at least largely participate in the conduct of the business and commerce of their native land.

PHYSICAL EDUCATION.

During the whole course of the development of the educational system of the islands, particularly during recent years, instruction in physical education on the part of the pupils has been given much emphasis. It is the consistent attempt of the bureau to extend and systematize this work along the best approved modern lines. This entire matter was submitted to a special committee of the superintendents' division of the regular annual convention of teachers in Baguio in May, 1918, and after considerable work, covering a period of several months, a manuscript was completed for the course of instruction in the graded schools and will soon be printed and in use throughout the islands. In the high schools, the intermediate schools, the special schools, and the university, much attention is given to athletics, particularly baseball and track contests. The result is that baseball is played throughout the islands by the children in the primary and intermediate schools, as well as by the high school students, and is practically the national game here, as in the United States. It is believed that these athletic sports will not only induce better health and better physique on the part of the Filipinos, but that, in addition, it will have an effect upon the development of the character of the average Philippine youth. The effect will be to give him a feeling of physical confidence and activity, and will develop the capacity to think quickly and decide promptly, and in every way augment his physical courage. But, further than that, the playing of athletic games, according to the ethics of such sports, will develop a spirit of fairness and honor and generosity toward opponents.

It is a matter of common observation that the boys and girls in the public schools show an unmistakable increase in size, weight, and physical stamina over those outside the schools and those of the previous generation.

During the coming month of May there will be held in Manila what is known in the Orient as the Far Eastern Games. China, Japan, and the Philippines will be represented by amateur athletes in baseball, tennis, swimming, and other games, and, in addition, all the recognized track sports. These Far Eastern Games are modeled after the Olympic Games which have been held in Europe during recent years, and they have not only a tendency to develop athletics in the Orient, but also to bring about closer and more friendly relations between the peoples of this section of the globe.

SCHOOLS FOR THE DEAF AND BLIND.

At the recent session of the legislature, and on the recommendation and special request of this department, an appropriation was made for the purchase of a site and construction of a new concrete building as a school for the deaf and blind, which has heretofore been housed in an old building. This building will be so constructed that it may constitute a unit, with others to be added as time passes, for the accommodation of deaf and blind students, or, if deemed best in the future, it may be turned over to the bureau of education as an ordinary schoolhouse and a new asylum for the deaf and blind constructed on another site. This is a step forward in the proper recognition of the needs for instruction of these poor children who have been deprived of their natural senses, and thus are in a situation which imperatively demands such instruction as may make them self-supporting and more happy under such conditions.

SCHOOLS FOR NON-CHRISTIANS.

One of the most difficult problems which confront the administration and the legislators in the islands is to take such steps as experience has proved to be best to bring up to a higher plane of civilization those elements of the population who are partially civilized and also, particularly with the rising generation, to educate in a practical way their children so that they will abandon their unsettled and wandering life and attach themselves to homes where, by the cultivation of the soil, they can begin a steady progress toward the culture and civilization of the majority of the Philippine population. These backward peoples, sometimes spoken of as non-Christians, are of four different classes, that is, the people dwelling in the mountains of northern Luzon; the Moros or Mohammedans of the Southern Islands; the Bogobos or Manobos, primitive people wandering through the forests without settled abodes in the island of Mindanao; and the Negritos, a scattered race with apparently no racial connection with the remaining peoples of the islands. This work will require many years and will be difficult and painstaking. It must be done principally with the children and in many instances, to be efficient, they must be segregated in dormitories and farm schools and taught new customs, practices, and habits, and be instructed in the cultivation of the various food products grown locally.

ENGLISH THE LANGUAGE OF THE FUTURE IN THE PHILIPPINES.

The teaching of English in the public schools has now covered a period of almost 20 years. As a result of this many thousands of young men and women now entering the activities of life possess a fair knowledge of the English language and use it in their daily contact with each other and with many others who have acquired the language. Some of these young men are already holding prominent positions in the public schools, in commerce, Government service, and every other walk of life, and their numbers run into hundreds of thousands. The language most spoken to-day and most widely disseminated and best understood in the Philippines is the English language. Furthermore, there is connected with the University of the Philippines, with other higher educational institutions of the islands, and in all the important activities of insular life a large number of young Filipinos who have been educated in American colleges and universities. These and many of the young men and women who were educated in the public schools, in the high schools, and the normal schools are beginning to take their logical places in leadership and influence in every

activity in the Philippines. As a result of the legislative appropriation of more than ₱30,000,000, heretofore adverted to, and which provides universal free education for all the children of the islands, this country is destined to be one of the several nations of the world scattered in every portion of the globe where the English language will be spoken. At this time the political leaders and the heads of the departments and of many of the bureaus and divisions of the Government largely speak Spanish more fluently than English, but this condition is fast changing, and in the course of approximately 15 years the English language will not only be the common medium of exchange among the people generally but will be the language which will practically be exclusively used in the Government and legislative service. As indicative of this situation, it is reported that the majority of the subscribers to the newspapers and periodicals published in English in the islands are Filipinos. The native dialects will continue to be used for home purposes for many years, possibly for one or two generations. They can not afford a medium of intellectual exchange because of the poverty of their vocabularies and because those speaking the various dialects are unable to understand each other. But at present already one-half of the people of the islands under the age of from 30 to 35 years are daily communicating with each other in business and social intercourse through the medium of the English language.

PHILIPPINE HEALTH SERVICE.

On December 31, 1918, Dr. J. D. Long, the director of health, severed his connection with the Philippine health service by resignation, as a result of which Dr. Vicente de Jesus, the assistant director, was later designated acting director of health. In the loss of the services of Dr. Long the bureau of health has been deprived of the valuable services of the man who had been directing its arduous work for many years, during which time great achievements were effected in the promotion of the public health along many important lines.

The year 1918 was characterized by successive occurrences of serious epidemics, which required the continuous activity of the medical staff. The hearty cooperation of health authorities in the several campaigns for the prevention and suppression of diseases has been fruitful to the extent of a gradual acquirement of knowledge of the means of introduction, infection, and spread of diseases, and their future prevention and control, as far as applicable, to local conditions.

EPIDEMICS.

Smallpox was prevalent in Manila and in almost every Province, Rizal, Cotabato, Davao, and Lanao having been most seriously affected. At the close of the year 16 Provinces were still registering cases in sporadic form. There were registered in Manila 1,326 cases and 869 deaths, and in the Provinces 40,126 cases and 12,951 deaths.

This unfortunate spread of the disease during 1918 was due to two causes: In December, 1917, two natives of Palawan, father and son, were rescued from shipwreck and brought to Manila, both developing smallpox upon their landing. In that same month an English sailor from Nankin, China, arrived in Manila and developed smallpox on the following day. Since June, 1909, Manila had been practically free from smallpox, but shortly after the occurrence of the above cases the epidemic spread rapidly, reaching its climax in April, May, and June, and in July it was largely put under control, but the danger existed that it might break out in various Provinces in the future. A vaccination campaign was begun at once, both in Manila and in the Provinces, but owing to the exhaustion of the supply of vaccine virus the work could not be carried on as extensively as it was desired. A large quantity of this supply had to be imported from Saigon and Shanghai. Vaccinations to the number of 414,410 were performed in Manila, with 69,579 positives, the small number of positives being due to the yearly vaccination and revaccination of the people. In the Provinces, including those of the Department of Mindanao and Sulu, 3,545,136 vaccinations, with 2,117,237 positives, were performed. A total of 5,136,400 units of vaccine were issued by the bureau of health, and more than 200 temporary vaccinators were appointed to help in controlling the epidemic. It is estimated that by the end of the year 1919 almost all the people in the Philippine Islands will have been vaccinated. Steps will be taken so that a continual process of vaccination can begin shortly after the birth of every child, and be renewed as

a condition precedent to entry in the public schools, the latter practice already existing. In five years practically all the children of the islands will be admitted to the schools, and that measure of itself will operate very largely as a preventive to this disease. These provisions, with an annual inspection for the unvaccinated and their vaccination when so discovered, ought practically to end the ravages of this epidemic.

Influenza, with its widespread disastrous effect, occurred twice during the year—in May and June, and in October and November. The peculiar care and precautions necessary for its prevention being unknown to the great majority of the people, a larger number died than would have succumbed otherwise. Deaths were due to complications of the respiratory organs in most cases, and in other cases generally to complication of the heart or other organs. The first outbreak was not so disastrous as the latter, which in 45 days gave a record of 37,950 cases, with 1,156 deaths in Manila, so that the health facilities were found to be inadequate to meet the situation. Hospitals were overcrowded and admission had to be restricted to the most serious cases, the rest having been supplied with medicine and treated at home. A bulletin containing prophylactic advice against the disease was printed and distributed, which gave considerable relief to the situation. In like manner the epidemic occurred in the Provinces, spreading in September to an alarming extent. Not a single Province, municipality, township, or barrio escaped its ravages. All physicians on the waiting list were temporarily employed, and medicine was distributed free in infected localities. In Cotabato about 95 per cent of the population was attacked by influenza during its maximum intensity. Shortage of medicine and sickness of the hospital personnel handicapped the service. The astonishing rapidity with which the epidemic spread made preventive measures taken of no avail. In Agusan about 20,000 cases, with 521 deaths, were registered. In Davao 4,626 cases, with 447 deaths, were reported. Two plantations were quarantined and, as a result, the people living there escaped the disease. In Zamboanga 70 per cent of the population was attacked. The mortality ranged from 7.8 to 15.21 per 1,000, there having been 80 per cent of the people of Dipolog and Lubungan subjected to the disease. In Lanao a few cases occurred, which is attributed to the comparatively high altitude of the Province and its climatic conditions. In Cagayan from 70 to 80 per cent of the people were attacked, deaths from influenza exceeding those from cholera and smallpox. In Sulu the epidemic was most intense in October and November, when the health and hospital personnel was attacked, as well as a large part of the constabulary soldiers. Judging from the records not yet completed, the director of health is of the opinion that about 70,315 deaths from influenza will be registered for 1918. It is estimated that about 40 per cent of the population of the islands was affected by the epidemic and that 2 per cent of the cases were followed by death. The effect of influenza upon business and agriculture was sudden, marked, and acute. In many localities farms were abandoned, crops were left to waste, and shops were closed for lack of men and schools for lack of attendance.

Cases of cholera occurred in the Provinces throughout the year, but were less severe than in 1917, when a total of 13,082 cases with 7,960 deaths were reported. In the same year 25 cases and 8 deaths were reported in Manila. In 1918, 7,533 cases and 5,168 deaths were reported from the Provinces; and in Manila 401 cases with 107 deaths occurred. In the Provinces, the disease could not be considered as epidemic, as it was of a scattered nature, and was always promptly controlled. The disease prevailed most in the Provinces of Bohol, Capiz, Cebu, Iloilo, Antique, and Oriental Negros, occurring in the Provinces of Leyte, Sorsogon, Cavite, Rizal, Pangasinan, Batangas, and Tayabas toward the latter part of the year. Fourteen municipalities in Pangasinan are still infected, registering at the close of the year 923 cases and 719 deaths. In the department at Mindanao and Sulu cases of cholera occurred in most of the Provinces during the year, the Provinces of Misamis and Surigao having been most seriously attacked. A total of 2,565 cases with 1,612 deaths in the entire Department were registered during the year. A large number of specimens were examined for cholera by the bureau of science and measures promptly taken to prevent its spread whenever it occurred. The cholera problem will, however, remain unsolved until adequate water systems and proper sewage disposals are adopted throughout the Provinces. It is believed that influenza had a weakening effect upon the resistance of the body so that a larger percentage of mortality was registered than in 1917.

OTHER DISEASES.

No case of either human or rat plague was reported during the year, but, owing to the increasing number of rats near the piers and along the entire seawall of the bay, steps should be taken to fill in the interstices with concrete, beginning at the piers and gradually completing the work. Otherwise, should the rats become infested with the fleas which carry the bubonic plague, there will result a terrible mortality from that disease. As this plague is active in many ports of the Orient, this menace constantly exists. Dysentery occurred from time to time in isolated places in a mild form. In like manner cases of typhoid fever were registered in Manila and in the Provinces. In Manila 55 deaths from rabies were registered, and 75 cases of diphtheria with 15 deaths were reported. During the year, 1,168 cases of tuberculosis were reported in Manila. Of the 650 cases at San Lazaro Hospital 257 died. Reports from the Provinces are still incomplete. In the Department of Mindanao and Sulu malaria was present in every Province, there being more than 14,666 cases reported. Distribution of quinine, establishment of sanitary barrios, and drainage of lowlands were among the measures taken against the disease.

HOSPITALS.

In September, 1918, the Zamboanga General Hospital was opened, and at present a large hospital at Davao is under construction. More than 50 emergency hospitals were established in those Provinces where epidemics reached alarming proportions. During the month of November and early part of December the Bagulo hospital was unable to accommodate patients suffering from influenza. The bureau of public works and the city of Bagulo had to provide provisional hospitals for their laborers, and the agricultural school had to utilize one of its buildings as a temporary hospital for the students. The same condition prevailed in the hospital at Bilibid Prison, where about 2,000 patients had to be treated in their respective apartments.

PROVINCIAL CEMETERIES.

Thirty-one cemeteries were reported in 1918 as being insanitary against 67 in 1917. Eighty new and 13 old cemeteries were approved.

SANITARY WORK IN THE PROVINCES.

Six Provinces were organized into sanitary divisions during the year, so that only seven Provinces remain to be organized, five of which will effect their organization during the present year.

Twelve gravity systems and 2,048 artesian wells are now in operation. Owing to lack of proper machinery, only 248 artesian wells could be drilled in 1918. Seventy thousand closets of the Antipolo type are in use at present, and 243 municipalities have passed ordinances providing for the installation of the same. In the Department of Mindanao and Sulu the septic tank and the pail system are also used. The manufacture of earthen vitrified pipe for the installation of the Antipolo system has also been successfully developed and about 4,000 pipes were sold, some of which were used for draining premises or used as walls for wells. In the Cullion Leper Colony important improvements were made, such as the construction of a Protestant chapel, a leper clubhouse, and a leper schoolhouse. Houses were built and certain improvements made in the new sanitary barrio. Four lepers were provisionally released upon showing negative results of examination for more than two years.

Considerable activity has been displayed in health, education, and publicity, which consisted chiefly of lectures given by health officers and nurses in public gatherings, such as carnivals, exhibitions, "ferias," and garden days. District nurses continued their visits from house to house, treating the simple cases of diseases and giving advice, especially to mothers and parturient women, on sanitation, housekeeping, and balanced diets, demonstrations of which were given. The work for infant welfare was carried on more vigorously. About 150,000 houses were visited by the district nurses, who gave instructions in hygiene, nursing, and diet. That the value of this work is rapidly being realized is shown by the numerous calls for nurses and midwives and by the increased number of deliveries in the hospitals. Attendance in the dispensaries has also increased, thus showing the greater confidence of the people in scientific treatment. One

of the most important features of sanitary work is the medical inspection of schools, which gave the children considerable relief from their ailments particularly toothache, skin diseases, and tonsillitis. It is hoped, therefore, that the means and facilities for the assignment of surgeons to every school will in a short time become available.

Under the provisions of Executive Order No. 88, which was issued by the Governor General for the protection of the Philippine National Guard against dangerous communicable diseases, the undersigned approved a set of sanitary regulations submitted by the director of health, which provide for all necessary measures designed to prevent the occurrence or spread of contagious diseases. Under these regulations, the Philippine health service, on November 4, 1918, created an extra cantonment zone within a circle of 7 miles' radius from Camp Claudio and with a population of about 107,914. Sixty-four artesian wells were drilled in this zone. The creation of the extra cantonment zone was instrumental in checking the spread of contagious diseases and in securing practical results in general sanitation.

COUNCIL OF HYGIENE.

The council of hygiene held regular sessions, as required by law, in which several routine matters were transacted. A number of special sessions were also held, in which attention was devoted to matters requiring legislation.

FOOD AND DRUG INSPECTION.

The board of food and drug inspection exercised the same strict supervision over shipments of food held at the customhouse and over all manufactured food in general. Like functions were exercised over drugs and patent medicines until February 28, when such duties were transferred to the board of pharmaceutical examiners and inspectors by Act No. 2762. Dairies selling milk in Manila have installed the necessary apparatus and endeavors were made to stop their practice of watering milk. Nine administrative decisions were rendered, and instructions were given for the proper method of manufacturing nipa vinegar. An equal number of convictions were obtained for violation of the law.

Thus it will be seen that the Philippine health service has made satisfactory progress during the year. The organization of Provinces into sanitary divisions, of women's clubs for the protection of early infancy, and of other societies for the promotion of the health conditions, together with the installation of water supplies and the adoption of sewage disposals and other sanitary improvements, all bespeak the earnest endeavor of the health officials as well as the support of the people in solving one of the most vital problems of these islands.

BUREAU OF QUARANTINE SERVICE.

On December 31, 1918, Dr. J. D. Long, chief quarantine officer for the Philippine Islands, was relieved from his duties in the bureau of quarantine service by Dr. T. R. Thompson, who assumed charge of said office by order of the Surgeon General of the United States Public Health Service.

As in past years, the aim of the service has been to prevent the entrance of quarantinable diseases into the Philippine Islands without causing unnecessary delay to vessels and their passengers, particular attention having been given to urgent need for all available tonnage of the United States and the allied nations and all possible assistance rendered in carrying such need into effect.

The functions of the bureau of quarantine service consist generally of national quarantine, consular quarantine, interisland quarantine, immigration inspections, sanitary maintenance of vessels and ports, physical examination of applicants for marine licenses and other government positions, and miscellaneous functions not included in the preceding classes.

Quarantine procedure has undergone a change from that of the past commensurate with the advanced knowledge of the means of transmission of diseases and their prevention. Of the eight quarantine stations operated in Manila, Cavite, Cebu, Iloilo, Jolo, Mariveles, Olongapo, and Zamboanga only those at Mariveles and Cebu are fully equipped for the disinfection and fumigation of vessels as well as for the care and hospitalization of suspects. Adequate equipment and quarters are also maintained at these stations. At

the other quarantine stations full equipment was not maintained in view of the limited shipping touching there, and vessels entering such stations which needed complete disinfection and quarantine for the personnel and passengers were sent to Mariveles or Cebu for that purpose. This procedure was followed without unnecessary hardship and with the least possible delay.

SANITARY CONDITIONS OF THE ORIENT.

The continued improvement of sanitary conditions in oriental ports has been greatly due to the requirements of the United States quarantine laws and their enforcement in the Philippine Islands and United States ports. Other ports which maintained continuous shipping with the United States and Philippine ports have had to take the necessary steps to comply with such requirements. The healthful conditions of oriental ports lessen the introduction of diseases which may enter the islands. The quarantine service is assisted by the American consulates in all the principal ports of the world, and the continual presence of prevailing diseases elsewhere requires the maintenance of quarantine measures in the Philippine Islands. The quarantine procedure in United States ports against the Orient is less complex than that of the Philippines against the same ports, due to the length of the sailing period, which is sufficient for the development of the disease prior to the arrival of a vessel in a United States port. There are many diseases in various ports which the islands must guard against. The quarantinable diseases from Canada and Mexico are mainly smallpox and typhus fever, and from Central America, Mexico, and South America yellow fever, which, if introduced into the Philippines, would likely depopulate the islands. But there are several factors operating to prevent the entrance of these latter diseases, namely, shipping between South and Central American ports and the Philippines is partly carried by vessels passing through the Panama Canal, where special preventive measures are taken by the officers of the United States Public Health Service in charge of quarantine in the Canal Zone to prevent infected vessels from carrying the disease into the zone, the long period of time needed by such vessels to reach the Philippines, and the special quarantine procedure at Philippine ports for such vessels.

It may be noted here, however, that since the war has ended direct shipping lines between South America and the Philippines will possibly be established, and consequently stricter precautions will be necessary. In Java, plague, smallpox, typhus fever, and cholera were present in epidemic and endemic form during the year. Plague and smallpox were more active than cholera in India. In Singapore plague was most active for three months, after which the cases and deaths decreased. Smallpox, malaria, dysentery, pneumonia, diphtheria, tuberculosis, typhus fever, and influenza were also reported, but only malaria, dysentery, and pneumonia were prevalent. From Indo-China a considerable number of deaths caused by cholera, plague, and smallpox were also reported. In China, as a whole, plague, smallpox, and typhus fever were continually present, but not in dangerous epidemic form. Epidemic meningitis was the only disease which assumed serious proportions in Hongkong. The Philippine quarantine service is taking all the necessary measures to prevent its introduction into the Philippine Islands. Several diseases were also reported from Amoy and Shanghai, but not in such epidemic form to be a menace to the Philippines. In general, typhus fever, smallpox, and pneumonic plague were reported from Japan, but none of these diseases was prevalent in epidemic form. In Yokohama only typhus fever occurred in a mild form, while in Kobe smallpox, typhus fever, and dysentery caused a considerable number of deaths.

QUARANTINABLE DISEASES.

The decrease in the number of persons found infected with quarantinable diseases was due to the continuous improvement in sanitation on vessels coming to the Philippine Islands from foreign ports and to the thorough vaccination of crews and emigrants prior to their embarkation for the Philippines. Inter-island quarantine was of great assistance in controlling the spread of cholera and smallpox. Every necessary measure was adopted to detect cases on board all vessels, developed or undeveloped, of all quarantinable diseases, and steps were taken to prevent their dissemination.

INCOMING QUARANTINE.

Considerable knowledge of the health conditions at all oriental ports was found to be necessary to the boarding officers for the inspection of incoming vessels. Vessels entering the Philippines for the first time necessarily had to

spend longer time for inspection on account of their unfamiliarity with the quarantine procedure. Regular vessels are dispatched in a short time, varying from 10 to 40 minutes, according to the number of persons on board. In order to give the boarding officers effective view of persons to be inspected, it has been necessary to make quarantine inspection only during daytime. The slight delay caused by these requirements to vessels entering the Philippines after sunset was more than offset by the benefit resulting from inspection made by daylight.

CONSULAR QUARANTINE.

American consuls and officers of the United States Public Health Service abroad continued to extend invaluable services to the Philippine Islands by enforcing United States quarantine laws and regulations.

The following table gives part of the operation in the consular quarantine:

Bills of health issued	206
Crews inspected	23, 669
Passengers inspected:	
Cabin	8, 828
Steerage	15, 773
Pieces of cargo inspected and certified	7, 827, 652
Vessels disinfected and fumigated	23
Vessels inspected	194

FUMIGATION AND DISINFECTION OF VESSELS.

Fumigation of vessels at Philippine ports was continued as an antirrat measure and in order to maintain cleanliness on board and to save cargoes from damage by rats, cockroaches, and other insects. This process, which was carried on as many times as necessary, brought out effective results. After fumigation, all interisland vessels were required to be cleaned and to renew their painting. Also arrangements for food, water tanks, toilet facilities were inspected and necessary changes recommended. The presence of plague in foreign ports touched by vessels engaged in foreign and interisland trade also necessitated the fumigation of vessels.

In Manila 18 vessels were disinfected for having quarantinable diseases on board, for the prevention of smallpox, and also the crews of interisland vessels were vaccinated. Agents and owners of such vessels were warned against the employment of men who did not have certificates of vaccination and were required to bear the cost of disinfection whenever a case developed in a member of the crew who did not hold such a certificate. Considerable aid was given to the Philippine health service in disinfecting vessels carrying lepers.

INTERISLAND QUARANTINE.

Interisland boats without sickness on board were allowed to enter ports without inspection, but were required to call at a quarantine station for inspection whenever any case of illness occurred on board.

MEDICAL INSPECTION OF IMMIGRANTS.

Due to the limited personnel of the service, officers doing boarding duty were also required to make examination of allens on shipboard and at the quarantine office and immigrant detention stations. Out of the numerous vessels examined in the ports of Cebu, Iloilo, Jolo, Manila, and Zamboanga only 18 in Zamboanga were rejected, principally for trachoma and favus. Rejections have decreased in number, for the immigrants, who were mostly Japanese, were examined by the company's physicians prior to leaving Japan to prevent the introduction of the disease into the haciendas. In the Philippines trachoma is present in a mild type. Precautions should be taken against this disease, which causes defective vision. In conducting medical inspection, hookworm and other intestinal parasites have been found.

DOCK INSPECTION.

In spite of the little trouble which was had with regular boats calling at Philippine ports, daily inspection was maintained, and vessels were required to use rat guards. The bay and shore line were kept clean by daily inspection.

EXAMINATION FOR MARINE LICENSES.

Applicants for marine licenses were completely examined physically, for only physically sound men with normal color perception and good vision were admitted.

AIDS TO OTHER SERVICES.

As in previous years, the quarantine service continued to be of considerable aid to the other departments and bureaus of the Federal and Philippine Governments, furnishing at the same time information to foreign consuls regarding shipments of certain cargoes to their countries. During the war an officer was granted leave of absence to enter the medical corps of the Philippine National Guard, and Mariveles was used by the Navy as a base of the patrol maintained in Manila Bay.

NEEDS OF THE SERVICE.

The needs of the quarantine service were never exorbitant. Improved methods of conducting quarantine enabled the service to extend its work with the same personnel and a little increase in the cost of operation. However, the maintenance of quarantine buildings, launches, etc., are a constant demand, such as the cabin passengers' barracks at Mariveles, which requires reconstruction, and the attendants' quarters, which need immediate repair. At Cebu, the maintenance of a complete station for disinfection, sterilization, and fumigation of vessels and their passengers and cargoes for the southern islands is very necessary. Some of the buildings of the station are badly in need of repair, while others have to be rebuilt. Also the entire plumbing system of the island should be renewed.

At Manila, two launches are used by the service—the *Zapote*, a medium-size launch, and the *Mercury*, a small gasoline launch. The *Zapote* has been in daily use for 20 years. The expensive, continuous repairs necessary for this launch require the purchase of a new one as a matter of economy to the Government. Such a launch, if purchased, should be of such a size as would allow boarding outside the breakwater under all conditions of weather, and be able to make trips to Mariveles with supplies. The launch *Sanidad* at Cebu is also in poor condition. Nine thousand pesos were spent last year for repairs on the *Zapote* and *Sanidad*, and the same expense will continue in coming years. The quarantine service in the Philippines is, of course, a permanent institution, and so long as China, Indo-China, and India continue to be hotbeds of plague, smallpox, and other diseases, quarantine will be a necessity and the existing stations should be kept up to the highest degree of efficiency.

CAVITE AND OLONGAPO.

At Cavite and Olongapo the vessels of the United States Navy were permitted to enter and receive quarantine inspection. As these stations are not fully equipped it has been intended to send infected vessels to Mariveles. However, not a single infected vessel has arrived. In addition to their regular work, commissioned medical officers of the Navy performed the duties of quarantine officers at both ports. The statistics of the work for these ports for the fiscal year 1918 were as follows:

Cavite:

Vessels inspected.....	18
Crew inspected.....	1, 270
Passengers inspected.....	8
Bills of health issued.....	12

Olongapo:

Vessels inspected.....	12
Crew inspected.....	1, 491
Passengers inspected.....	270
Bills of health issued.....	10

CEBU QUARANTINE STATION.

At Cebu cases of cholera, small pox, and leprosy were found on board of some arriving vessels. The officers and other personnel of the station on duty aided much to improve the sanitary conditions of the city and Province of Cebu. And

was also given in the clinics of the Southern Islands Hospital. The transactions for the year at Cebu are partly shown by the following statistics:

Vessels inspected from United States ports.....	9
Vessels inspected from foreign ports.....	853
Vessels disinfected on account of diseases.....	5
Vessels in quarantine.....	5
Vessels fumigated.....	83
Crew inspected on arriving vessels.....	4,317
Cabin passengers inspected on arriving vessels.....	34
Steerage passengers inspected on arriving vessels.....	93
Persons detained in quarantine under observation.....	148
Persons vaccinated at quarantine.....	87
Cases of cholera at quarantine station.....	6
Cases of smallpox at quarantine station.....	4
Seamen examined for licenses.....	32
Bills of health issued for vessels for foreign ports.....	61
Bills of health issued to vessels for United States.....	15
Interisland vessels inspected in port.....	137

ILOILO.

The officers of the quarantine service at Iloilo were moved to the new custom-house. Due to lack of funds, a building for disinfection station could not be erected, so the vessels were only inspected at this station, and in cases of cholera and smallpox the necessary treatment was given as far as facilities permitted. It is very essential that steam disinfection facilities be available at Iloilo, and it is hoped that a building as a disinfection station will soon be erected. Negotiations made for acquiring one of the buildings on the abandoned military reservation at Fort San Pedro have so far been futile. Regular fumigation was, however, continued, vessels' crews vaccinated, and a rigid inspection of vessels while in port maintained. The quarantine statistics at Iloilo may be tabulated as follows:

Vessels inspected.....	24
Vessels disinfected and fumigated.....	157
Vessels in quarantine.....	2
Crew inspected.....	1,059
Passengers inspected:	
Cabin.....	17
Steerage.....	49
Persons bathed and effects disinfected.....	272
Cases of quarantinable diseases detected.....	6
Bills of health issued.....	61
Sanitary inspection interisland vessels.....	242
Pieces of cargo certified.....	363,241
Seamen examined for licenses.....	5

JOLO.

Being very near to foreign ports, where but little is known of the prevalence of quarantinable diseases and where sanitary measures are entirely absent, Jolo is undoubtedly in great need of quarantine inspection. During the past year epidemics were introduced at this port, which were a continuous menace to the Philippines. The quarantine work during last year was performed by the medical staff of the Jolo Hospital, this service paying the hospital the usual fees provided by law. The quarantine transactions for the year were as follows:

Vessels inspected.....	31
Crew inspected.....	1,633
Passengers inspected:	
Cabin.....	104
Steerage.....	370
Bills of health issued.....	24

MANILA.

The quarantine work at Manila was conducted as usual. Infected vessels arrived nearly every month during the year. Owing to the short distance from foreign ports where quarantinable diseases prevailed, inspection at Manila had

to be carefully performed, which practice met with no opposition from steamship agents. The individual transactions may be partially comprehended by the operations embraced by the following statistics:

Vessels inspected from United States ports.....	80
Vessels inspected from foreign ports.....	441
Vessels disinfected on account of disease.....	14
Vessels disinfected and fumigated.....	150
Vessels given sanitary inspection in port.....	106
Crew inspected on arriving vessels.....	47,194
Cabin passengers inspected on arriving vessels.....	10,985
Steerage passengers inspected on arriving vessels.....	28,102
Persons vaccinated at quarantine.....	17,517
Applicants for marine licenses examined.....	345
Stool examinations made for hookworm.....	2,579
Bills of health issued for United States ports.....	179
Bills of health issued for foreign ports.....	415

MARIVELES QUARANTINE STATION.

As war measure, the practice of granting pratique to vessels at Mariveles was discontinued, and all vessels required to secure their pratique at Manila or other ports, according to destination. This proved to be satisfactory to all concerned, particularly the custom service. Most of disinfection and fumigation work was performed at other ports. Vessels transporting lepers to Cullion were, however, disinfected and cleaned as usual. General sanitary improvements were made, such as the installation of a public laundry and toilets and the opening of a free dispensary for the poor inhabitants of Bataan adjacent to the quarantine station. Efforts to stamp out malaria were continued, and the whole population of about 2,500 in number were vaccinated.

A survey was made of the mountain canyon, the source of the water supply of the quarantine station, and of the town of Mariveles, and it is intended to reserve this watershed from settlement or use. Such reservation will not work hardship to anyone, as the land is neither occupied nor privately owned. A portion of the operations of the station at Mariveles is shown as follows:

Vessels at the station for treatment.....	4
Crew bathed and effects disinfected.....	201
Persons vaccinated.....	2,500
Vessels disinfected.....	4

ZAMBOANGA.

Zamboanga has increased in importance, due to the regular call of large liners in addition to the small coasting vessels between Borneo, the adjacent islands and the Straits Settlements. Statistics of the work during the year at Zamboanga have been tabulated as follows:

Vessels inspected.....	47
Crews inspected.....	2,845
Passengers inspected:	
Cabin.....	761
Steerage.....	1,912
Bills of health issued.....	40

PRIVATE SCHOOLS.

On July 16, 1918, Mr. M. H. O'Malley, the superintendent of private schools, resigned, and Mr. T. J. McQuaide, the assistant superintendent, assumed charge of private schools and was later appointed to succeed Mr. O'Malley.

The most notable and marked feature of the year's work of the private schools has been the large attendance and the increased number of schools that have received Government recognition. So great has been the enrollment that certain schools, particularly those located in the city, have refused many applications for admission, and in other schools a great number have been placed on the waiting list. The total number of schools reached 255, of which 127 are primary schools, 76 intermediate schools, 34 high schools, 17 colleges, and 1 commercial school.

The courses of study have undergone no important changes. With the exception of geography and music, no new texts have been introduced. Greater emphasis has been placed on conversational English and the discussion of current events. The latter subject has been given a definite place on the program, and it is the belief of the private school authorities that the reading of magazines, periodicals, and other informative literature will occupy no small part of the students' time.

Industrial education, on the whole, has been carried on along the same lines as in previous years. Greater interest has been noted in the girls' pay schools, although in the schools and colleges for boys, industrial instruction has not attracted so much interest as compared with the enthusiasm demonstrated by the other sex. The explanation can be found in the fact that the greater part of the students of the boys' pay schools come from families of the wealthy class. The reverse is true, however, in the public schools. Here, the industrial schedule is carefully made out, and the articles turned out are sold in the open market, and the producer receives a share of the profits realized. In lace making the school children, especially those attending the schools run by the Belgian Sisters, hold their own. These Sisters are deserving of all credit for the excellent work they are doing, and every encouragement should be offered them to assist them in their noble undertaking. Furthermore, the children are taught to make their own clothes and every encouragement has been given them to bank their earnings, thus making twofold the benefit derived from their work. Gardening still continues where ground is available.

Physical education in the form of athletic games and military drills, as in previous years, has occupied a considerable part in the school work. It is to be hoped that steps will be taken to further develop physical exercises in the private schools.

One of the greatest problems that have occupied the attention of the office of the private schools has been the matter of transfers. Under the provisions of existing law, students from recognized private schools are given the privilege of transferring to the public schools and in the grade to which their credentials entitle them without subjecting themselves further to entrance examinations, and likewise public-school pupils enjoyed the like privilege of transferring to private schools. This arrangement has for some time been used in the proper way, but as time went on it began to be abused, and many cases have arisen in which students from public schools were admitted to private schools and enrolled in grades higher than that to which their cards entitled them. The private-school officials, upon learning of these irregularities, have set up a series of rules governing transfers and enjoined the directors of schools to adhere to them. It is the belief of this department that closer supervision in this matter and cooperation among the authorities concerned will ultimately result in a stricter observance of the rules and in doing away with the practice mentioned.

The same problem which is constantly presented to the public-school administration in the matter of securing the services of good teachers also confronts the private school authorities. The need has been even more pressing, as the public schools could depend upon their own schools for preparing teachers whereas the private schools do not have such advantage. Most of the members of the faculty, especially those of the night schools, are either persons whose time during the day is devoted to their respective occupations or are recruits from advanced students of some institutions. Such material, of course, could not be expected to render the best of service. There are, however, a few schools that have teachers whose experience and training are above the average. To meet the situation described above, it has been the aim of the office of the private schools to encourage the establishment of normal institutes similar to those run by the bureau of education. This step has already been taken, and during the period covering this report two normal institutes have been established—one in Tagudin, Mountain Province, and the other in Manila. This number is insufficient to meet the needs of the situation, but it is a right beginning and bright prospects are expected in the future.

Another great obstacle to the progress of the private schools is the low salaries paid to the teachers. With very few exceptions, teachers of private institutions, especially the Catholic schools, receive salaries very inadequate for their work. This is due, in some respects, to the fact that the revenue derived from tuition fees is very small. In the larger schools of Manila, however, the instructors receive reasonable compensation.

One marked difference between the private schools and the public schools is noted in the number and size of school libraries. The bureau of education has

spared no means to attach at least one library to each of its schools, and plans are underway to establish traveling libraries for the benefit of the students and teachers. With very few exceptions, the libraries of the private schools are far from being satisfactory, and more attention should be given to this essential part of school work.

This department is especially pleased to make of record the patriotic services rendered by the children of the private schools in the Red Cross and Liberty loan campaigns conducted during the year. In Manila, as well as in the Provinces, it was largely through the participation of the school children and the teachers that made these drives successful. Liberty bonds were voluntarily purchased and money contributions liberally given. Parades, entertainments, and other forms of social functions were organized, and in these activities the pupils and teachers have voluntarily and patriotically offered their services and what little earnings they had. The sacrifice is indeed worthy of high praise.

STATISTICAL INFORMATION.

Many elaborate tables are attached to the inclosed reports of the director of education, the acting director of health, the chief quarantine officer, and the superintendent of private schools, to which reference is made for a fuller knowledge of facts and details.

Respectfully submitted.

CHARLES E. YEATER,
Secretary of Public Instruction.

REPORT OF THE SECRETARY OF FINANCE.

JANUARY 1 TO DECEMBER 31, 1918.

DEPARTMENT OF FINANCE,
Manila, June 11, 1919.

SIR: I have the honor to submit the following annual report of the department of finance, corresponding to the year ending December 31, 1918.

The general economic conditions of the country have been excellent during the year. The trade balance from 1899 to the end of 1915 was against the Philippines in the amount of ₱37,621,183, but after said period our foreign commerce has given us constantly greater favorable trade balances. In 1918 the net trade balance in favor of the islands was ₱73,190,541, the greatest known in the history of the country, which balance, added to the favorable trade balances of 1916 and 1917, gives a total of ₱144,065,600 in the lapse of three years, or a net balance in favor of the Philippines of ₱106,444,417 during the 20 years of American administration. With the possible exception of the sugar-producing regions, prosperity was prevalent throughout the country during the year. The marvelous development of the trade of the islands, in which the definition of the political status as stated in the Jones law was a powerful factor, attracted American and foreign capital, and Filipino capital, which had been known heretofore for its extreme conservatism, was encouraged to undertake decidedly commercial, industrial, and agricultural pursuits.

The finances of the Government could not have been in a more flourishing state, as shown by the following statement of annual income and expenditures corresponding to a period of 10 years.

	Balance.	Income.	Expenditures.
1909.....	₱14,136,927.29	₱23,095,099.07	₱24,874,563.70
1910.....	12,357,432.66	27,243,504.50	25,592,368.93
1911.....	14,008,568.23	31,677,266.12	28,505,721.41
1912.....	17,180,112.94	31,247,673.39	31,461,746.81
1913.....	16,966,039.52	26,979,400.64	29,553,342.34
1914.....	14,392,097.82	11,567,878.28	15,790,776.12
1915.....	10,169,199.98	23,706,500.86	25,316,472.49
1916.....	8,559,228.35	29,558,626.45	27,883,738.03
1917.....	10,234,116.77	45,704,855.69	40,906,813.13
1918.....	15,032,159.33	54,781,241.44	45,408,717.74
1918.....	24,404,683.03	68,690,105.13	57,496,043.63

¹ Period of six months only, from July 1 to Dec. 31, on account of change in fiscal year.

The income has increased from ₱23,095,099.07 in 1909 to ₱68,690,105.13 in 1918, the estimate for 1919 being ₱70,957,757. The great increases began in 1916 simultaneously with the big trade balances in favor of the Philippines.

A comparison of the actual income and expenditures during the last two years is shown in the following statement:

Consolidated statement of income and expenditures for 1918 and 1917.

Items.	Fiscal year 1918.	Fiscal year 1917.
Income:		
Revenue from taxation.....	₱44,559,229.56	₱35,448,412.30
Import duties.....	13,479,736.56	11,183,822.41
Excise tax.....	13,191,928.85	12,933,425.77
Licenses and business tax.....	14,881,515.09	10,454,013.71
Wharfage tax.....	1,805,477.69	1,137,632.26
Franchise tax.....	1,026,569.04	782,675.49

Consolidated statement of income and expenditures for 1918 and 1917—Contd.

Items.	Fiscal year 1918.	Fiscal year 1917.
Income—Continued.		
Revenue from taxation—Continued.		
Documentary tax.....	P 847,037.52	P 682,692.20
Income tax.....	2,550,149.20	1,178,063.70
Immigration tax.....	207,752.00	152,232.00
Tonnage dues.....	157,756.42	152,600.40
Inheritance tax.....	76,127.74	5,284.80
Apportionment of internal revenue to local government.....	(3,164,033.55)	(3,164,033.55)
Incidental revenue.....	3,163,181.53	2,296,278.70
Revenue from public forests.....	588,084.98	457,065.04
United States internal revenue.....	1,919,753.11	1,253,851.27
Fines and forfeitures.....	546,224.85	419,672.40
Sales and rentals of public domain.....	103,423.13	70,067.64
Other.....	4,795.46	64,122.92
Earnings and other credits.....	20,888,353.84	16,855,156.90
Operating revenue of commercial and industrial units.....	15,872,531.91	11,832,921.60
Other income of operating units.....	62,301.51	53,626.00
Dividends on bank stock.....	496,599.53	314,788.70
Income from U. S. A. T. freight service.....		357,470.60
Income incidental to functional activities.....	3,319,138.16	2,710,641.20
Sales of fixed property.....	113,494.89	81,641.40
Sales of friar lands real estate.....	866,656.26	570,822.15
Sales of San Lazaro real estate.....	214,299.52	229,246.60
Proceeds of loan from currency reserve fund.....		425,000.00
Sales of agricultural bank loans.....	164,140.00	
Interest repayments, railway companies.....	290,202.06	
Credit adjustments—prior year.....	79,340.20	181,401.90
Accounts payable adjustments.....	46,277.13	72,422.20
Inventory adjustments (sales stock).....	27,629.29	50,063.10
Expired money orders (sec. 1973, Administrative Code).....	5,433.78	19,457.10
Pension fund reversions.....		8,447.60
Receipts applicable to prior year.....		20,182.30
Total income.....	68,690,105.13	54,781,341.44
Expenditures:		
Revenue service.....	13,050,950.39	9,063,829.20
Expense of revenue collection.....	1,271,918.98	1,151,690.50
Operating expense of commercial and industrial units.....	11,779,031.41	7,912,138.90
Debt service.....	2,247,165.73	2,167,962.11
Interest on public debt.....	1,297,226.00	1,289,822.60
Payments to sinking funds.....	884,939.73	865,639.40
Repayment of loans.....	65,000.00	22,500.00
General-welfare service.....	34,764,539.11	29,437,890.50
Executive direction and control.....	1,098,269.98	1,123,300.60
Legislation.....	1,010,659.82	980,423.20
Adjudication.....	1,529,840.46	1,517,048.70
National defense.....	2,624,108.36	598,578.20
Law and order.....	3,660,254.09	3,729,336.45
Public health.....	2,828,018.39	2,114,690.40
Suppression of animal diseases and plant pests.....	632,515.30	721,594.90
Protection against forces majeures.....	162,980.47	160,817.20
Regulation of public utilities.....	37,674.84	44,491.70
Other protective service.....	96,707.39	78,609.00
Public education.....	4,406,890.50	4,372,467.70
Public corrections.....	909,283.72	857,793.50
Public charities.....	146,980.98	206,874.00
Other social improvement.....	32,127.50	
Conservation of natural resources.....	329,205.20	278,796.90
Development of commerce.....	2,241,658.88	1,696,173.60
Development of agriculture.....	2,149,627.74	1,719,662.50
Philippine publicity.....	12,006.88	1,730.50
Development of industrial arts and sciences.....	187,906.36	190,382.20
Other economic development.....	674,803.67	155,491.00
Aid to local governments.....	9,994,047.49	8,879,512.10
Outlays and investments.....	6,641,943.08	3,982,291.40
Purchase and construction of public works.....	1,698,314.05	1,040,831.60
Purchase and construction of equipment.....	1,005,766.99	723,457.30
Corporate investments.....	3,253,942.04	1,494,328.50
Advances to railway companies under guaranty contracts.....	683,920.00	733,674.40

Consolidated statement of income and expenditures for 1918 and 1917—Contd.

Items.	Fiscal year 1918.	Fiscal year 1917.
Expenditures—Continued.		
Extraordinary charges.....	₱785,903.66	₱584,353.28
Retirement gratuities, Act 2589.....	785,903.66	584,353.28
Debit adjustment—prior year.....	5,541.66	162,391.13
Mindanao and Sulu colonies.....		112,101.01
Accounts receivable written off.....		28,926.66
Cancellation of insurance claims.....		1,286.42
Prior year charges.....	5,541.66	20,077.14
Total expenditures.....	57,496,043.63	45,408,717.74
Increase in current surplus for the year.....	11,194,061.50	9,372,523.70
Add—current surplus at the beginning of the year.....	24,404,683.03	15,032,159.33
Current surplus at the end of the year (see balance sheet).....	35,598,744.53	24,404,683.03

The principal increases in the income were due to import duties, excise taxes, and to license and business taxes, brought about by the greater volume of trade and by the high prices of goods, which condition influenced the collections under percentage taxes; to the income tax as a result of the general prosperity and the greater efficiency of the inspection service; to United States internal revenue resulting from the greater exportation of cigars and cigarettes; to the commercial and industrial activities of the Government; and to income incidental to the workings of the Government on account of the rise in prices, as well as of the greater impulse given to the activities of governmental institutions.

In the expenditures the main increases are found in the operating expenses of the commercial and industrial activities of the Government, and expenses for national defense, public health, the development of commerce, agriculture and other economic pursuits, aid to local governments, public works, and corporate investments. The operating expenses of the commercial and industrial activities are offset by greater income and are due, as stated, to the higher prices of goods and to increased wages; the national defense includes the training of the National Guard; the development of agriculture, commerce, and other economic pursuits includes the food campaign, irrigation, and other activities of the bureaus of agriculture, commerce, and industry, and science; aid to local governments represents the funds allotted by the insular government to local governments for schools, public health, and roads, in the same manner that the expenditures for public works and equipment include all the works and equipment for general purposes, for schools, and public health incurred by the insular government. Taking into consideration the expenses for schools and public health included in the aid to local governments, public works, and equipment, the total expenditures made during 1918 for public instruction was ₱7,163,337.63, which is 12.5 per cent of the total expenditures of the Government for the year and 20.6 per cent of the expenses for general-welfare service. In the same manner the total expenditures for public health during the year was ₱3,492,373.24, which constitutes 6.1 per cent of all the expenditures and 10 per cent of the expenditures for general-welfare service. The investments in corporations consisted principally in the purchase by the Government of stocks of the Philippine National Bank, ₱1,595,960; of the National Coal Co., ₱918,000; loan to the Manila Railroad Co., ₱700,000; and loans pertaining to the former Agricultural Bank transferred by the Philippine National Bank to the Government, ₱39,982.04.

At the close of the fiscal year 1918 there was a balance in the treasury of ₱35,598,744.53, of which ₱24,832,714.98 are unappropriated funds and ₱10,766,029.55 are appropriated funds.

In view of the satisfactory state of the treasury and of the after-war changes that are expected to occur in the economic condition of the world, the revision of the laws on tariff, internal revenue, and immigration has been postponed for future consideration. Future attention will also be given to the plan of prescribing new basis for the distribution of taxes between the insular, provincial, and municipal governments. A part of the taxes is apportioned according to population, and it is expected that the new census, which is being

taken now, will be a source of plentiful information to be used in the preparation of such an important measure.

The budget system, inaugurated in 1917, has been followed since then and upheld warmly by the administration. Every day its principles become more firmly rooted, and with legitimate pride the Government can boast itself of having introduced into the system of public finance of the country an improvement directed to greater clearness and publicity of the appropriations and to the best coordination of its activities. The recent constitution of the council of state has a special significance to the financial system. That institution is called upon to outline the financial policy of the country, and the fact that the presidents, the people's representatives of both legislative houses are members of said body gives assurance as to the permanent soundness of the budget system.

The circulation at the end of the year 1918 reached ₱131,151,883, which, compared with ₱102,580,313 for the previous year, gives an increase of ₱28,571,570 in a year, and compared with ₱51,284,906 for 1915, gives an increase of ₱79,866,977 in three years. Based on the population as shown in the census of 1903, the circulation per capita was ₱17.36 on December 31, 1918, while on the same date of former years it was ₱13.44 in 1917, ₱8.58 in 1916, and ₱6.72 in 1915.

The currency reserve fund which guarantees the redemption of treasury certificates and the parity of Philippine currency reached on December 31 the sum of ₱112,549,208.73. Act No. 2776 on currency fixes the minimum of said fund at the amount of certificates of the treasury in circulation or available for circulation plus 15 per cent of the coins in circulation and in the treasury. Pursuant to this provision the minimum of the fund on December 31 was ₱102,824,160.64, the excess of this minimum being transferable to the general funds at the discretion of the secretary of finance. However, the undersigned, expecting that a reaction might cause great demand for exchange, has deemed it advisable to preserve untouched the entire reserve fund then existing without taking any action on the excess over the minimum fixed by law, especially when ₱10,261,526 of said fund are improperly invested in long-term loans to the Manila Railroad Co. and to the insular, provincial, and municipal governments.

In February, 1918, the legislature passed Act No. 2737, creating the mint of the Philippines and appropriating for said purpose the amount of ₱100,000. In the appropriation act for 1919, ₱250,000 more were set aside for the same object. The machinery has already been contracted for, as well as the services of an expert for its installation and for the organization of this new branch of the service. It is expected that the mint will begin its operations toward the latter part of 1919, meeting thereby a long-felt necessity and remedying the difficulties encountered in providing the country with the necessary coins.

The work performed by the different bureaus under the jurisdiction of the department of finance is shown below:

BUREAU OF THE TREASURY.

GENERAL TREASURY CASH ACCOUNT.

The following statement shows the movement of funds in the Insular Treasury during the fiscal year 1917:

General treasury funds:

Balance on hand Dec.	
31, 1917-----	₱16, 699, 844. 21
Receipts—	
Cash deposits-----	108, 172, 803. 55
Currency ex-	
changes, Jan. 1	
to Aug. 15, 1918—	35, 892, 162. 60
Total -----	₱160, 764, 810. 36
Expenditures—	
Cash withdrawals—	100, 623, 717. 58
Currency ex-	
changes, Jan. 1	
to Aug. 15, 1918—	35, 892, 162. 60

General treasury funds—
Continued.

Expenditures—Contd.

Amount of gold
standard fund
transferred to
currency reserve
fund, Aug. 15,
1918 ----- ₱3,039,992.03

Total ----- ₱139,555,872.21

Balance on hand Dec. 31, 1918 ----- ₱21,208,938.15

Depository funds:

Balance on hand Dec.

31, 1917 ----- 25,986,046.59

Deposits—

Treasurer of
United States --- 70,315,870.58
United States dis-
bursing officers 82,524,731.12
Insular disbursing
officers ----- 106,288,516.29

Total ----- 285,115,164.58

Withdrawals—

Treasurer of
United States --- 65,805,665.04
United States dis-
bursing officers 79,484,901.77
Insular disbursing
officers ----- 86,772,020.30
Philippine Na-
tional Bank re-
demption fund 2,000,000.00

Total ----- 234,062,587.11

Balance on hand Dec. 31, 1918 ----- 51,052,577.47

Silver certificate reserve
fund:

Balance on hand Dec.
31, 1917 ----- 70,137,150.00
Certificates issued Jan.
1, to Aug. 15, 1918-- 61,000,000.00

Total ----- 131,137,150.00

Certificates retired
Jan. 1 to Aug. 15,
1918 ----- 42,027,900.00

Balance on hand Aug.
15, 1918, transferred
to currency reserve
fund ----- 89,109,250.00

Total ----- 131,137,150.00

Currency reserve fund:

Balance transfer red
from gold standard
fund Aug. 15, 1918-- 3,039,992.03
Balance transfer red
from silver certifi-
cate reserve fund,
Aug. 15, 1918----- 89,109,250.00

Receipts—

Cash deposits Aug.
16 to Dec. 31,
1918 ----- 1,851,460.36

Currency reserve fund—
Continued.

Receipts—Continued.

Currency ex-

changes, Aug.

16 to Dec. 31,

1918 -----

₱35,769,605.00

Certificates issued,

Aug. 16 to Dec.

31, 1918 -----

12,680,000.00

Total -----

₱142,450,316.39

Expenditures—

Cash withdrawals,

Aug. 16 to Dec.

31, 1918 -----

813,690.07

Currency ex-

changes, Aug. 16

to Dec. 31, 1918 -----

35,769,605.00

Certificates re-

tired, Aug. 16 to

Dec. 31, 1918 -----

4,774,954.00

Total -----

41,358,249.07

Balance on hand Dec. 31, 1918 -----

₱101,092,067.32

Total funds for which the insular treasurer was

accountable on Dec. 31, 1918 -----

173,353,582.94

This balance of ₱173,353,582.94 was distributed as follows:

Distribution of funds.

	United States currency.	Philippine currency.	Philippine currency.
In treasury vaults	\$1,070,590.46	₱14,399,442.39	₱16,540,633.31
On deposit with local banks:			
On open account		60,846,586.01	60,846,586.01
On time deposit		3,883,669.94	3,883,669.94
On deposit with authorized depositories in the United States	46,038,851.84		92,077,708.66
Total	47,109,442.30	79,134,698.34	173,353,582.94

The cash balances of the following accounts make up the "general treasury funds" balance of ₱21,208,938.15, as indicated in the following statement:

General fund	₱20,691,157.11
Friar lands bonds sinking fund	151,675.53
Public works bonds sinking fund	49,043.51
Manila sewer and waterworks bonds sinking fund	240,597.59
Cebu waterworks bonds sinking fund	16,875.00
Manila R. R. purchase bonds sinking fund	1,244.22
Southern lines bonds sinking fund	4,443.00
Land title assurance fund	5,560.78
Property insurance fund	(2,513.05)
Fidelity bond premium fund	50,849.43
Total	21,208,938.15

The "depository funds" balance of ₱51,052,577.47, as shown in the following statement, consists of the cash balances on hand December 31, 1918, in the following accounts:

Burnham memorial fund	₱4,000.00
Manila R. R. Co. (contract No. 4)	20.00
Treasury overage account	261.89

Antituberculosis Society	₱3,321.27
Trust fund, sec. 2, Act No. 1510, Manila Rwy. Co.	188,212.60
Trust fund, sec. 1, Act No. 1592, Manila Rwy. Co.	457.34
Trust fund, Act No. 2393, Silay Electric Light & Power Co.	1,000.00
Cavite electric light franchise, sec. 2, Act No. 667	1,000.00
Philippine National Bank	37,652,787.18
Rizal Day fund, 1917	11.20
Insular disbursing officers	216,449.12
United States disbursing officers (Navy)	2,142,981.29
Treasurer of the United States	5,277,031.56
United States disbursing officers (Army)	5,060,423.76
United States disbursing officers (Coast and Geodetic Survey)	4,613.00
United States disbursing officers (American consul)	7.26
Philippine National Bank (redemption fund)	500,000.00
Total	51,052,577.47

The silver certificate reserve fund was abolished on August 15, 1918, and its balance transferred to the currency reserve fund, pursuant to the provisions of Act No. 2776. The balance of ₱101,092,067.32 in the "currency reserve fund" consists of ₱9,014,363.64 held in the treasury and \$46,038,851.84 United States currency deposited with depositories in the United States.

The sum of ₱60,346,586.01, shown above under the heading "Distribution of funds" as on open account with local banks, represents the balance of current account with the Philippine National Bank and draws interest at the rate of 1 per cent per annum on daily balances.

The following statement shows the funds to which the time deposits of ₱3,888,669.94 pertain, and the banks that hold them, together with the rate of interest drawn:

Name of fund.	Name of bank.	Interest per annum.	Amount of deposit.
		<i>Per cent.</i>	
General fund	Philippine National Bank	3½	₱2,700,000.00
Do	do	1	1,000,000.00
Fidelity deposits, sec. 1, Act No. 1592, and sec. 2, Act No. 1510.	do	3½	4,107.39
Fidelity deposits, sec. 2, Act No. 1510.	Hongkong and Shanghai Banking Corporation.	3½	184,562.55
Total			3,888,669.94

On December 31, 1918, there was on deposit with depositories of the Philippine Government in the United States the sum of \$46,038,851.84. This amount belongs to the currency reserve fund, and is distributed as follows:

	U. S. Currency.
Chase National Bank, New York City	\$1,353,548.84
Philippine National Bank, New York City	38,785,303.00
Mercantile Trust Co., St. Louis, Mo.	850,000.00
Central Trust Co., Chicago, Ill.	550,000.00
Seattle National Bank, Seattle, Wash.	200,000.00
National Bank of Commerce, Seattle, Wash.	250,000.00
Commercial National Bank, Washington, D. C.	250,000.00
Continental Trust Co., Washington, D. C.	200,000.00
National Shawmut Bank of Boston, Mass.	800,000.00
Merchants National Bank, Boston, Mass.	200,000.00
Mechanics and Metals National Bank, New York City	800,000.00
National Bank of Commerce, New York City	500,000.00
Anglo and London-Paris National Bank, San Francisco, Calif.	1,000,000.00
First National Bank of Omaha, Omaha, Nebr.	250,000.00
Central National Bank, Lincoln, Nebr.	50,000.00
Total	46,038,851.84

Of the above deposits, \$39,638,851.84 draws interest at the rate of 2½ per cent and the balance 3 per cent.

SPECIAL FUNDS.

Land-title assurance fund.—This fund is provided for by Act No. 496, known as the land registration act, its purpose being to reimburse anyone who may lose title to property registered under the act. The net income during the year amounted to ₱26,716.56 and derived from percentage fees on lands registered and from interest and dividends from investments. No claims against the fund have yet been paid since the passage of the act. The amount of the fund at the close of the year was ₱194,609.54.

Property-insurance fund.—This fund was established for the insurance of Government property against destruction or damage resulting from an act of God. The income of the fund during the year was ₱30,599.37, and derived from premiums and interest on investment, while the losses paid amounted to ₱275,493.18, or a net loss to the fund of ₱244,893.81. This large loss is due to the burning of the supplies, materials, and bodega belonging to the constabulary in the Oriente Building in the fire that took place on July 24, 1918. The fund paid for this loss the sum of ₱262,061.47. The fund had no balance on December 31, 1918.

Fidelity-bond premium fund.—This was created for the insurance of the fidelity of officers and employees of the Government and certain semigovernmental institutions. The rate of premium for the insurance in this fund has been fixed at one-half of 1 per cent per annum. The total amount of bonds in effect on December 31, 1918, was ₱17,754,715. The premiums collected during the year were ₱82,406.42 and the losses paid ₱21,668.03. Of this latter amount ₱21,269.50 pertained to 10 provincial and municipal employees and ₱398.53 to 2 insular employees. The amount of the fund at the close of the year was ₱100,000.

CURRENCY-RESERVE FUND.

The "gold-standard fund" and the "silver certificate reserve fund," which were established, the former for the maintenance of the parity of the Philippine silver peso with the theoretical gold peso, and the latter for the redemption of the silver certificates sold, have been superseded by the "currency-reserve fund." In pursuance of the provisions of Act No. 2776, made effective by the proclamation of the governor general, dated August 16, 1918, the gold-standard fund and silver certificate reserve fund were merged to constitute the currency-reserve fund. The functions of maintaining the parity of the Philippine currency and of redeeming the treasury certificates issued are, therefore, now devolved upon the currency-reserve fund. The balances of ₱14,496,789.46 of the gold-standard fund and ₱89,109,250 of the silver certificate reserve fund, totaling ₱103,606,039.46, were combined to form the currency-reserve fund. The transactions of the gold-standard fund, silver certificate reserve fund, and currency-reserve fund are regarded as pertaining to a single fund in this report.

The receipts of the fund during 1918 derived from interest on investments and bank deposits, premium on exchange, and other miscellaneous items amounted to ₱2,623,291.13, as against ₱1,806,957.47 in 1917. The increase of ₱821,333.66 was due chiefly to the greater amount of interest-bearing deposits with depositors in the United States supporting larger issue of treasury certificates. The receipts from premium on New York exchange, which was formerly a large source of income, has been very greatly reduced since the exchange operations between New York and Manila were conducted almost entirely by the Philippine National Bank. The exchange on New York sold during the year through the fund amounted to \$1,100,074.44, as compared with \$11,008,028.29 for 1914, \$11,010,730.51 for 1915, \$8,877,930.71 for 1916, and \$729,840.58 for 1917. During the year transfers of funds amounting to ₱30,480,000 were made to New York for United States Government purposes. These transfers were effected by credits furnished in Manila to the Treasurer of the United States in exchange for an equivalent amount placed by said official to the credit of the Philippine Government in United States currency in New York.

Telegraphic transfers and demand drafts in the sum of ₱2,367,675.38 were sold during 1918 by the insular treasurer's office on the provincial treasurers as compared with ₱2,748,038.19 for the preceding year. The premiums realized amounted to ₱5,926.70. The total amount of telegraphic transfers and demand drafts sold by provincial treasurers on the insular treasury aggregated ₱1,167,312.37, as against ₱902,422.38 for the preceding year.

The total expenses from the fund amounted to ₱567,199.22, as compared with ₱258,847.35 for 1917. The increment of ₱308,351.87 is due largely to the increase in circulation which required the printing of a large quantity of treasury certificates and the coinage of large amounts of subsidiary and minor coins.

The total expense during the year for printing currency was ₱163,465.67 and that for coinage ₱395,585.65.

During the year treasury certificates amounting to ₱73,680,000 were issued, and ₱46,802,854 retired, resulting in a net additional issue of ₱26,877,146, as compared with ₱36,990,000 issued and ₱9,602,850 retired, or a net additional issue of ₱27,387,150 for 1917.

Under the provisions of Act No. 2776, the currency reserve fund shall not at any time be less in amount than the nominal value of the treasury certificates in circulation and available therefor, plus 15 per cent of the money of the Government of the Philippine Islands in circulation and available therefor, exclusive of the silver certificates in circulation protected by gold reserve. The minimum of the fund on December 31, 1918, will, therefore, be as follows:

Nominal value of treasury certificates in circulation and available therefor-----	₱97,014,296.00
15 per cent of the money of the Philippine Islands in circulation and available therefor, exclusive of the treasury certificates in circulation protected by gold reserve (the total silver and minor coins in circulation, in treasury vaults, and in United States Mint being ₱38,732,430.92)-----	5,809,864.64

Total-----	102,824,160.64
------------	----------------

The amount of the fund on December 31, 1918, was ₱112,549,208.73, as per the following:

Assets:	
Investments-----	₱10,261,526.00
Due from United States Mint-----	778,113.96
Accrued interest receivable-----	417,736.42
Accounts receivable-----	164.30
Cash-----	101,092,067.32
	<hr/>
	112,549,608.00
Less outstanding warrants-----	370.03
	<hr/>
Total-----	112,549,237.97

Liabilities:

Accounts payable-----	29.24
Balance-----	112,549,208.73

Total-----	112,549,237.97
------------	----------------

The cash balance shown above is composed of the following items:

In treasury vaults-----	₱9,014,363.64
-------------------------	---------------

With depositories in United States:

Chase National Bank, New York-----	\$1,353,548.84
Philippine National Bank, New York-----	38,785,303.00
National Bank of Commerce, New York City-----	500,000.00
Mercantile Trust Co., St. Louis, Mo-----	850,000.00
Central Trust Co. of Illinois, Chicago-----	550,000.00
National Shawmut Bank, of Boston, Mass-----	800,000.00
Continental Trust Co., Washington, D. C-----	200,000.00
Merchants National Bank, Boston, Mass-----	200,000.00
Mechanics & Metals National Bank, New York City-----	800,000.00
National Bank of Commerce, Seattle, Wash-----	250,000.00
Commercial National Bank, Washington, D. C-----	250,000.00
Anglo-London-Paris National Bank, San Francisco, Calif-----	1,000,000.00
Seattle National Bank, Seattle, Wash-----	200,000.00
First National Bank of Omaha, Nebr-----	250,000.00
Central National Bank, Lincoln, Nebr-----	50,000.00

46,088,851.84	92,077,703.68
---------------	---------------

101,092,067.32

Deducting from ₱112,549,208.73 the sum of ₱102,824,160.64, the minimum of the fund as stated above, there was a balance of ₱9,727,048.09, which represents the excess over the minimum of the fund.

BONDED INDEBTEDNESS.

All the bonded indebtedness of the Government of the Philippine Islands consist of 10-30 years 4 per cent gold bonds, distributed as follows:

Issue.	Date of maturity.	Amount.
Friar lands bonds.....	Feb. 1, 1934	₱14,000,000
Public works bonds:		
First issue.....	Mar. 1, 1935	5,000,000
Second issue.....	Feb. 1, 1936	2,000,000
Third issue.....	Aug. 31, 1939	3,000,000
Manila sewer and waterworks bonds:		
First issue.....	June 1, 1935	2,000,000
Second issue.....	Jan. 2, 1937	4,000,000
Third issue.....	Jan. 2, 1938	2,000,000
Cebu waterworks bonds.....	Jan. 1, 1941	250,000
Manila railroad purchase bonds.....	Dec. 1, 1946	8,000,000
Total.....		40,250,000

Adequate legislation provides for sinking funds to redeem these bonds at maturity. The accretions of the sinking funds consist of the interest derived from investment and of the annual allotments from the insular government and the cities of Manila and Cebu, as the case may be. Except in the cases of Manila and Cebu waterworks, these sinking funds are adjusted annually so that the amount thereof on each anniversary of issue of the bonds equal an annuity of ₱19,371.33 for each ₱1,000,000 of bonds outstanding, together with interest at the rate of 3½ per cent per annum from the date of issue.

The amounts of the bond sinking funds at the close of the year were as follows:

Friar lands bond sinking fund.....	₱4,947,780.89
Public works bond sinking fund.....	2,801,384.13
Manila sewer and waterworks bond sinking fund.....	2,194,962.35
Cebu waterworks bond sinking fund.....	31,061.67
Railroad purchase bond sinking fund.....	316,285.07

Total.....	10,291,494.20
------------	---------------

GUARANTY OF INTEREST ON BOND ISSUES OF RAILWAY CORPORATION.

Under the authority of an act of Congress approved February 6, 1905, the insular government guarantees 4 per cent interest for a period not to exceed 30 years on the first-lien bonds issued by the Philippine Railway Co. for the construction of certain lines in the islands of Panay and Cebu and by the Manila Railroad Co. for the construction of the southern lines in the island of Luzon.

On December 31, 1918, the combined issues of both companies outstanding totaled \$22,263,000 United States currency, and the net balance of the sums advanced by the Government under the above guaranty was ₱5,976,958.33.

INVESTMENTS.

The following statement shows the status of investments on December 31, 1918, made from different funds under the control of the insular treasurer:

Title of accounts and funds:

General fund.....	₱7,262,720.00
Currency reserve fund, Act No. 2776.....	10,261,526.09
Manila sewer and waterworks bonds sinking fund, Act No. 1828.....	1,934,927.50
Public-works bonds sinking fund, Act No. 2425.....	2,733,360.00

Title of accounts and funds—Continued.

Friar lands bonds sinking fund, Acts Nos. 1749, 2550, and 2592-----	₱4,781,665.00
Cebu waterworks bonds sinking fund, Act No. 2009-----	14,000.00
Manila railroad purchase bonds sinking fund, Act No. 2625--	312,080.00
Land title assurance fund, Act No. 496-----	188,009.00
Property insurance fund, sections 336 to 341, Act No. 2711--	2,500.00
Fidelity bond premium funds, secs. 318 to 335, Act No. 2711--	45,000.00
Purchase of the Manila R. R. Co. stock, Act No. 2574-----	8,000,000.00
Total-----	85,535,787.50

CIRCULATION.

The money in circulation on December 31, 1918, amounted to ₱131,151,883.03, as compared with ₱102,580,313.57, the circulation on December 31, 1917, or an increase during the year of 1918 of ₱28,571,569.46.

The circulation of the islands on December 31, 1918, consisted of the following:

Treasury certificates-----	₱95,112,523.00
Silver and minor coinage-----	25,669,147.88
Notes, Bank of the Philippine Islands-----	5,962,852.50
Notes, Philippine National Bank-----	4,407,359.65
Total circulation-----	131,151,883.03

Based on the population of the Philippine Islands of 7,635,426, per census of 1903, the per capita circulation on December 31, 1918, would be ₱17.36.

BANKS AND BANKING.

Article 8, chapter 41, of Act No. 2711, places the supervision of banking institutions and building and loan associations under the jurisdiction of the insular treasurer.

On December 31, 1918, there were in operation in the Philippine Islands the following banks and building and loan associations:

DOMESTIC.

Philippine National Bank, Manila, with branches at Aparri, Bacolod, Cebu, Corregidor, Davao, Iloilo, Kabanatuan, P. I., and New York, N. Y.

Bank of the Philippine Islands, Manila, with branches at Iloilo and Zamboanga.

Pangasinan Bank, Dagupan.

Monte de Piedad and Savings Bank, Manila.

The Philippine Trust Co., Manila.

Postal Savings Bank, Manila.

El Hogar Filipino, Manila.

Manila Building and Loan Association, Manila.

Zamboanga Building and Loan Association, Zamboanga.

FOREIGN.

International Banking Corporation, branch at Manila, with subagency at Cebu.

Hongkong and Shanghai Banking Corporation, branch at Manila, with subagency at Iloilo.

Chartered Bank of India, Australla, and China, branch at Manila, with subagencies at Cebu and Iloilo.

The Yokohama Specie Bank, branch at Manila.

The great prosperity and business activity attained by the islands are reflected in the large resources of the banks, which on December 31, 1918, reached the amount of ₱399,807,941, as compared with ₱239,247,726 on December 31, 1917; ₱121,954,154 on December 31, 1916; ₱71,542,868 on December 31, 1915; and ₱66,639,866 on December 31, 1914.

The following is a comparative consolidated statement of the resources and liabilities of all banks and trust companies in operation in the islands at the close of business on December 31 for the years 1917 and 1918:

	Dec. 31.		Increase.
	1917	1918	
RESOURCES.			
Loans and discounts.....	P52,871,372.23	P73,565,065.69	P20,693,693.46
Overdrafts.....	30,535,890.84	64,110,967.58	33,575,076.74
Due from other banks, head office, branches, and agents.....	86,349,011.52	107,246,295.27	20,897,283.75
Cash on hand and other cash items.....	12,598,119.89	19,255,720.73	6,657,600.84
Other resources.....	56,893,331.96	135,629,862.71	78,736,530.75
Total.....	239,247,726.44	390,807,941.98	160,560,215.54
LIABILITIES.			
Capital stock.....	12,568,765.80	14,955,358.99	2,386,593.19
Reserve fund.....	4,121,763.66	5,826,836.38	1,705,072.72
Bank notes in circulation.....	10,137,857.50	10,370,212.15	232,854.65
Deposits.....	140,093,958.53	237,859,470.18	97,765,511.65
Due to other banks, head office, branches, and correspondents.....	47,545,230.42	71,894,801.57	24,349,571.15
Other liabilities.....	24,780,650.53	58,901,262.71	34,120,612.18
Total.....	239,247,726.44	390,807,941.98	160,560,215.54

THE GOVERNMENT AGRICULTURAL BANK.

As stated in the report for the preceding year, pursuant to the provisions of section 6 of Act No. 2612, all the current assets and liabilities of the agricultural bank were transferred as of May 2, 1916, to the Philippine National Bank except certain mortgage loans, which were not accepted by the latter. Of these loans, P160,440 as principal and P105,301.12 as interest were collected during 1918. The total of outstanding loans on December 31, 1918, was P532,816, and the interest accrued and unpaid up to December 31, 1917, amounted to P76,593.99. No computation of the interest up to December 31, 1918, has been made as yet.

INSURANCE.

During the year all German insurance companies in operation in the islands were liquidated by the alien-property custodian. The withdrawal of these companies did not cause any disturbance to commerce.

On December 31, 1918, there were 36 fire, 27 marine, 8 life, and 17 miscellaneous insurance companies doing business in the Philippine Islands.

A complete statistical statement showing the financial condition and operation of the insurance companies for 1918 was not available at the present writing, as the annual statements of said companies have not been received.

BUREAU OF CUSTOMS.

GENERAL TRADE CONDITIONS.

The following statement shows the value of imports and exports, total trade, and trade balance for each year from 1899 to 1918:

Year ended Dec. 31—	Imports.	Exports.	Total trade.	Balance of trade in favor (+) of or against (-) the islands.
1899.....	P38,385,972	P29,693,164	P68,079,136	P- 8,692,808
1900.....	49,727,558	45,980,746	95,708,304	- 3,746,812
1901.....	60,324,942	49,006,706	109,331,648	-11,318,236
1902.....	66,684,332	57,343,808	124,028,140	- 9,340,524
1903.....	67,622,768	64,793,492	132,416,260	- 2,829,276
1904.....	59,155,462	58,299,000	117,454,462	- 856,462
1905.....	60,101,100	66,909,548	127,010,648	+ 6,808,448
1906.....	52,807,536	65,285,784	118,093,320	+12,478,248
1907.....	60,907,620	66,195,734	127,103,354	+ 5,288,114
1908.....	58,372,240	65,202,144	123,574,384	+ 6,829,904
1909.....	62,168,838	69,848,674	132,017,512	+ 7,679,836
1910.....	99,438,722	81,256,926	180,695,648	-18,181,796
1911.....	96,048,814	89,674,254	185,723,068	- 6,374,560
1912.....	123,335,802	109,846,600	233,182,402	-13,489,202
1913.....	106,625,572	95,545,912	202,171,484	-11,079,660
1914.....	97,177,306	97,379,288	194,556,574	+ 201,962
1915.....	98,624,337	107,626,008	206,250,375	+ 9,001,641
1916.....	90,992,675	139,874,365	230,867,040	+48,881,660
1917.....	131,594,081	191,208,613	322,802,674	+59,614,552
1918.....	197,198,423	270,388,964	467,587,387	+73,190,541

As will be noted from the foregoing, the total value of foreign trade for the year 1918, computed from the declared values of imports and exports, amounts to ₱467,587,387, a value larger than in any calendar year in the history of the islands, and is approximately 45 per cent greater than the preceding year. This reflects in a direct manner the wonderful development that has taken place in the external commerce of the islands notwithstanding the shortage of tonnage, the excessive freight rates, and the prohibition placed on exportation of a number of commodities.

It will also be noted from the above statement that, notwithstanding the unusually heavy importations of rice and manufactures of cotton, iron, and steel, the year 1918 closed with a trade balance of ₱73,190,541 in favor of the islands as against ₱59,614,552 for the preceding year.

The year was characterized by an exceptionally large increase recorded in the export of coconut oil, coincident with decreased export of copra, showing the rapid development of the oil industry in the islands, which may cause the export of copra to lose its importance in the future. Increase in the export of coconut oil was 177 per cent, while decrease in the export of copra was 37 per cent. The next higher increase in exports was that of tobacco products, followed by hemp and sugar. The total exports mark an increase of ₱79,180,351, or 41 per cent over the preceding year.

While exports for 1918 shows a considerable increase over those of 1917, imports likewise show a comparatively larger increase over those of 1917. Imports during the year under review show an increase of ₱65,604,362, or 50 per cent. The principal imports during the year according to their importance are cotton goods, iron and steel, and rice.

FOREIGN CARRYING TRADE.

A total of 652 vessels, with an aggregate net tonnage of 1,412,871 tons, entered the Philippine Islands from foreign ports during the year 1918, while vessels to the number of 659, representing a total net tonnage of 1,544,648 tons, were cleared for foreign ports. Compared with the previous year this is an increase in total entrances and clearances of 11 vessels with 46,427 tons.

The value of imported and exported merchandise carried under each of the principal flags shows increases for all flags, with the exception of the Dutch vessels, which show a considerable decrease. American vessels show the highest proportionate increase, Philippine vessels second, and Japanese vessels third. The nationalities of vessels by order of the trade value carried during the year were: American, ₱162,861,385; British, ₱120,999,888; Japanese, ₱107,698,080; Norwegian, ₱17,589,898; Philippine, ₱15,568,718; Danish,

₱13,078,701; and Dutch, Spanish, Chinese, Swedish, French, and others aggregating ₱29,790,717. In 1917, as well as in previous years, British vessels furnished space for the largest portion of our external trade, but in 1918 she was surpassed by American vessels and pushed down to second place on the list. In 1917 no Chinese, Danish, French, or Swedish vessels participated in carrying our imports or exports, but in 1918 they share the Philippine carrying trade to the aggregate amount of ₱20,000,000.

TRADE WITH THE UNITED STATES.

Trade with the United States during the past year, both in imports and exports, has increased tremendously as compared with previous years and is the highest on record. Imports amounted to ₱118,321,405 against ₱75,858,443 in 1917, an increase of ₱42,462,962, or 56 per cent, and exports amounted to ₱179,103,848 against ₱127,028,922 in 1917, an increase of ₱52,074,926, or 41 per cent. The imports from the United States were 60 per cent of the total imports from all countries, and the exports to the United States were 66 per cent of the total exports.

IMPORTS.

The year just closed has been one of unprecedented activity in the import trade. The total value of imports for the year 1917 was 45 per cent over that of 1916, but imports during 1918 were still larger, showing a 50 per cent increase over 1917. This remarkable increase during the past two years gives evidence of the continued development of our home market for foreign products and the increased purchasing power of the inhabitants of the Philippine Islands. The principal items which contributed to this increase in the order of their importance were: Cotton goods, iron and steel manufactures, rice, fish and fish products, automobiles, and wheat flour. Great increases are also noted in the importations of silk goods, chemicals, drugs, dyes, and medicine, meat products, books and other printed matter, coal and leather manufactures. Insignificant decreases, however, were registered in several items, such as dairy products, soap, cattle, and paper and the manufactures thereof.

As in the preceding year, United States ranked first among the countries furnishing our imports during 1918; Japan, second; French East Indies, third; China, fourth, and Australia, fifth. Imports from these countries show remarkable increases over those of 1917. United States registered an increase of 56 per cent; Japan, 59 per cent; French East Indies, 33 per cent; China, 54 per cent, and Australia, over 100 per cent. Slight increases are also noted in the importations from British East Indies, France, Siam, and Switzerland. Imports from the United Kingdom, Hongkong, Spain, Dutch East Indies, and Italy show considerable decreases, while imports from the central countries of Europe ceased altogether.

COTTON AND ITS MANUFACTURES.

In general the prices of cotton goods prevailing in 1918 were approximately 50 per cent higher than the prices that prevailed in 1917, but notwithstanding this drawback cotton imports during the year exceeded those of previous years both in quantity and in total value. The total value of cotton importations in 1918, which constitute more than one-fourth of the total imports, reached ₱58,016,844, as against ₱37,574,005 in 1917 and ₱18,649,772 in 1916. Imports from the United States, Japan, and China show material increases. The total value of imports from the United Kingdom increased considerably in comparison with the total value reached in 1917, but it is still much below prewar imports. Imports from France, Italy, Netherlands, and Spain show a substantial decline, while imports from the central countries of Europe have completely ceased.

IRON AND STEEL.

Imports of iron and steel and manufactures thereof during the year amounted in value to ₱24,507,970, as compared with ₱11,855,125 in 1917, or an increase of over 100 per cent. The prices of iron and steel products rose tremendously during 1918 as a result of the increased freight rates and the great difficulty experienced in the United States in securing shipping space for iron and steel

cargoes, and while the quantity imported increased considerably as compared with 1917 imports the high total value reached in 1918 is largely due to higher prices. Approximately 92 per cent of the total importations of these commodities came from the United States and 5 per cent from Japan. Imports from Japan show an increase of ₱597,215 over those of 1917, while imports from China likewise show a notable increase. Imports from the United Kingdom have suffered a gradual decline since the outbreak of the war. Imports from that country in 1913 amounted to ₱2,279,244, as compared with only ₱215,000 in 1918.

RICE.

Rice imports during the year, which represent 8.33 per cent of the total imports, show a substantial increase over those of the previous year both in the quantity imported and the total value. The average value per 100 kilos amounted to ₱8.94, as compared with ₱7.33 in 1917 and ₱6.87 in 1916. French East Indies again heads the list of countries furnishing our rice imports, of which approximately 84 per cent came from that country. Siam ranked second and contributed 14 per cent, which is equivalent to ₱2,305,333 in value, as compared with only ₱696,722 in 1917, and British East Indies third with a contribution of ₱397,118 as against ₱228 in 1917.

OTHER IMPORTS.

Automobiles.—Importations of automobiles and parts thereof, including tires, amounted to ₱6,525,665 as against ₱3,080,801 in 1917. Automobiles to the number of 1,911 were imported during the past year as compared with 1,237 in 1917 and 986 in 1916.

Silk and its manufactures.—The value of importations of silk and manufactures thereof totaled ₱5,727,024 as compared with ₱3,961,187 in 1917, and is the highest on record in the history of the islands.

Food products.—The total value of food products other than rice and cattle imported during the year amounted to ₱25,627,985 as compared with ₱17,608,865 in 1917. With the exception of rice, wheat flour was the food product of greatest value imported during the year, the total value thereof amounting to ₱6,033,528 as against ₱3,831,056 in 1917. Australasia furnished approximately 88 per cent of the total imports of wheat flour, amounting to ₱5,526,666 in value, which constitutes almost 75 per cent of the total import trade with that country. Imports of this commodity from Australasia in 1917 amounted to ₱2,425,003 only. Importations of fish and fish products show the highest proportionate increase, which amounted to ₱5,212,350 as compared with ₱1,855,736 in 1917. Considerable increases are also noted in the importations of breadstuffs other than flour, cocoa, eggs, fruits and nuts, meat products, and vegetables, while slight decreases are noted in the importations of coffee, dairy products, and sugar in comparison with 1917 importations.

Leather goods.—Leather and manufactures thereof amounting to ₱4,171,064 were imported in 1918 as compared with ₱3,247,817 in 1917.

Vegetable fibers and manufactures thereof.—Importations of commodities of this class amounted to ₱4,724,325 as against ₱3,071,808 in 1917 and ₱1,241,175 in 1916.

Coal.—The total value of coal importations for 1918 amounted to ₱4,662,349 as against ₱3,076,470 in 1917. The increase shown is wholly due to higher prices that prevailed during the year, as the quantity imported is considerably less than in 1917. Japan is the principal source of our coal supply, approximately 68 per cent of the total coal importations, amounting in value to ₱3,158,052, having come from that country as compared with ₱2,359,838 in 1917. China ranked second with a contribution amounting to ₱845,119 as compared with ₱292,457 in 1917, and British East Indies third, which furnished coal imports valued at ₱222,172 as against ₱109,259 in 1917.

EXPORTS.

The total value of exports during the past year shows an increase of 41 per cent over 1917. This increase is due both to an increase in the amounts of the various commodities exported as well as to higher prices received for same. Exports to the United States during 1918 show an increase of 41 per cent over those of 1917, and those to the United Kingdom 89 per cent. Considerable increases are also shown in the exportations to Japan, Spain, China, British East

Indies, and French East Indies, while slight declines are shown in the exportations to France, Hongkong, and Australasia. The principal articles of export during the year, according to their importance, were hemp, coconut oil, sugar, tobacco products, and copra.

Hemp.—The total quantity of hemp exported during the year shows a slight decline in comparison with the quantity exported during 1917, but exportations in 1918 are much greater in value than those of 1917. This indicates that exceptionally high prices were obtained for this product in foreign markets. Hemp exports valued at ₱65,468,402, which is 56 per cent of the total exports of this commodity during the year, went to the United States, as against ₱59,291,005 exported during 1917, an increase of ₱6,177,307. The most remarkable increase is shown in the exports to the United Kingdom. Hemp exports to that country reached ₱37,288,369 in value, as compared with only ₱18,980,263 in 1917, or an increase of almost 100 per cent. The average value per 1,000 kilos of hemp exported during 1918 amounted to ₱687.60, which is the highest on record.

Coconut oil.—Coconut oil is rapidly taking precedence over copra as an article of export. Exports of this commodity during the past year have shown such a tremendous increase that it is fair to assume that the coconut-oil industry is a permanent institution in the islands and will increase in importance with each succeeding year. Exports during 1918 amounted to ₱63,328,317, as compared with ₱22,818,294 in 1917 and ₱7,851,469 in 1916. The United States is practically the sole importer of this commodity in 1918, 98 per cent of the total exports having gone to that country and 2 per cent to Canada and Guam. This is due in a large measure to the prohibition placed by the War Trade Board on the exportation of coconut oil to foreign countries, which has since been abolished.

Sugar.—The total value of sugar exports during 1918 amounted to ₱31,608,780, as compared with ₱24,553,357 in 1917, and, with the exception of the year 1916, is the highest on record.

While higher prices were commanded by other Philippine products, both in the United States and in foreign markets, the average price of sugar exported in 1918, which amounted to ₱115.67 per 1,000 kilos, is below the average price for the year 1917. As usual, the principal markets for our sugar, according to their importance, are the United States, Hongkong, China, and Japan. Sugar amounting in value to ₱16,559,780, which is slightly over 52 per cent of the total sugar exports, went to the United States, while sugar valued at ₱6,631,536 was exported to Hongkong, ₱4,979,941 to China, and ₱3,320,735 to Japan.

Tobacco products.—Exports of tobacco products during 1918 have shown a very remarkable increase over those of 1917. The amount exported during the past year aggregated ₱27,150,628 in value, as compared with ₱14,301,061 in 1917, or an increase of nearly 90 per cent. The greatest increase is shown in cigars, the amount exported and the value realized therefrom being the highest on record. Cigars to the number of 359,664,827, valued at ₱14,233,437, were exported during the year, of which approximately 80 per cent went to the United States. The average value per 1,000 cigars obtained in 1918 is considerably higher than the average value obtained in 1917, and is the highest in the records of the country.

Copra.—Copra exports have shown a marked decline, and it is believed that in view of the rapid development that has taken place in the local coconut-oil industry, copra will gradually lose its importance as an article of export. Exports during the past year amounted to ₱10,377,029 in value, as against ₱16,654,301 in 1917. With the exception of a small shipment of copra samples to Japan, valued at ₱12, no shipment is recorded to any foreign country. All went to the United States. This is due to the embargo placed on the exportation of copra to foreign ports, which has since been rescinded.

Embroideries.—Exports of embroideries have shown a tendency to increase with each succeeding year since the outbreak of the war. This is probably due in a large measure to the inability of the European countries to supply the demands of the United States for this product owing to the conditions created by the war, which have practically paralyzed the activities in the manufacture of articles destined for export. The unusually great quantities of embroideries exported to the United States during the past three years seem to indicate that Philippine embroideries have attained a position in the United States markets, and it is fair to assume that they will continue to develop in the future, notwithstanding a possible resumption of the manufacture and export of embroideries from Europe incident to the establishment of peace. The value of embroideries exported during the past year aggregated ₱4,361,352, almost all of

which went to the United States, as compared with ₱3,929,318 in 1917, ₱2,328,024 in 1916, and ₱735,303 in 1915.

Ore and bullion.—The total amount of gold bullion exported was 65,918 ounces, valued at ₱1,873,938, as against 88,658 ounces, valued at ₱2,677,284, exported in 1917, showing a considerable decrease in the quantity and total value exported, and a slight decrease in the average value per ounce. Silver ore, valued at ₱28,000, was exported during the year, all of which went to the United States.

CUSTOMS COLLECTIONS.

The following statement shows the total collections of the Bureau of Customs, by sources, for the year 1918, as compared with the year 1917:

Sources.	1918	1917	Increase (+) or decrease (—).
Import duty.....	₱13,662,761.27	₱11,333,968.54	+ ₱2,348,792.73
Export duty ¹	4,795.46	2,121.02	+ 2,674.44
Wharfrage.....	1,311,667.35	1,144,397.32	+ 167,260.03
Fines and seizures.....	45,550.52	28,018.23	+ 17,532.29
Tonnage dues.....	157,812.05	152,708.27	+ 5,103.78
Storage.....	97,461.33	46,469.28	+ 50,992.05
Immigration dues.....	215,264.00	157,064.00	+ 58,200.00
Auction sales.....	2,829.82	3,531.51	— 701.69
Arrastre and piers collections.....	305,983.81	244,762.42	+ 61,221.39
Various other sources ²	388,492.40	319,498.97	+ 68,993.43
Trust fund.....	227,928.18	138,467.78	+ 89,460.40
Total.....	16,440,536.19	13,571,007.34	+ 2,869,528.85

¹ Collected on hemp reexported from the United States prior to Oct. 13, 1913.

² License fees for vessels included in this source.

Besides the total collections shown in the foregoing table, internal-revenue taxes to the amount of ₱2,144,564.31 were collected by this bureau in pursuance of the provisions of Act No. 2432, as amended by Act No. 2445. The amount collected in 1917 was ₱2,283,738.35.

INSPECTION OF VESSELS.

During the year inspections were made by the hull and boiler inspectors of 269 vessels, with an aggregate net tonnage of 44,024.40. Of the total number inspected, 11 were steamers of more than 1,500 tons; 22 steamers and 2 sailing vessels of less than 1,500 but more than 500 tons; 27 steamers and 11 sailing vessels of less than 500 but more than 300 tons; 36 steamers and 23 sailing vessels of less than 300 but more than 100 tons; 121 steamers and 16 sailing vessels of less than 100 tons. Twenty-four steam vessels were awaiting inspection at the close of the year. Reports were received of 76 vessels wrecked and lost during the year, and 19 vessels were placed out of commission. Admeasurements were made of 76 vessels.

MARINE OFFICERS.

The board of marine examiners examined 251 applicants for certificates of various grades, of which number 231 passed and 20 failed. The total number of marine officers holding unexpired certificates at the end of the year was 1,750, while 620 expired certificates are outstanding.

DOCUMENTATION AND LICENSING OF VESSELS.

During the year under review 42 steam vessels, with a total net tonnage of 7,049, and 300 sailing vessels, with a total net tonnage of 6,743, were newly documented in the coastwise trade, as compared with 16 steam vessels, with a net tonnage of 2,673, and 411 sailing vessels, with a net tonnage of 6,208, documented in 1917. In the bay and river business 229 vessels, with a net tonnage of 4,541, were newly documented in 1918, as compared with 109 vessels, with a net tonnage of 1,481, in 1917.

Coastwise licenses were issued during the year to 151 steam vessel, having a net tonnage of 23,464.84, and 711 sailing vessels, with a total net tonnage of

27,570.10. Bay and river licenses were issued to 1,580 vessels, having a total net tonnage of 35,672.27. The number of vessels in commission during the year, therefore, amounted to 2,442, with a total net tonnage of 91,707.21.

IMMIGRATION AND EMIGRATION.

The total number of passengers arriving in the Philippine Islands during the past year was 21,668, as compared with 19,635 in 1917, and the total number departing was 17,710, as compared with 16,293 in 1917, not including enlisted men and others attached to the military or naval forces of the United States traveling as such. Of the total number of inward-bound passengers, 8,866 were immigrants, 7,622 being males and 1,244 females; while of the total number of departing passengers 885 were emigrants, showing a net gain to the islands of 7,891 in so far as actual settlers are concerned. The figures for the past year show a decided increase in the number of inward-bound passengers over those of 1917. This increase is accounted for by a relatively large increase in the number of Chinese immigrants coming to the Philippine Islands and seeking admission during the year, which may be attributed to the disturbed conditions that prevailed in China during the year caused by the internal wars that were going on between the different factions of the population. Chinese immigrants to the number of 4,999 were admitted during the year as compared with 3,094 admitted in 1917, or an increase of 61 per cent. During the year citizens of the United States to the number of 2,052 arrived and 3,011 departed, and citizens of the Philippine Islands to the number of 3,438 arrived and 3,967 departed. As usual, the Chinese again head the list of aliens arriving at and departing from Philippine ports during the year. The total number of Chinese admitted was 10,376, of whom 4,999 were immigrant aliens and 5,377 were returning residents. Japanese immigration showed a slight increase, the total number admitted being 3,965, of whom 3,559 were immigrant aliens and 406 were returning residents. Japanese to the number of 1,561 departed during the year. Spanish subjects to the number of 143 were admitted, of whom 67 were immigrant aliens and 76 were returning residents, while a total of 129 Spanish persons departed.

A total of 347 immigrants were debarred from admission during the year, and 72 aliens were deported from the islands under the provisions of the immigration and opium laws.

SECRET SERVICE.

During the past year the secret-service force of this bureau has been ably managed and recorded a most brilliant work. Numerous arrests were made for attempted violations of customs, immigration, and opium laws; large quantities of contraband merchandise were seized, and many attempts to evade the revenue laws were frustrated. A total of 332 cases were handled, of which number convictions were secured in 217 cases, 55 cases were dismissed, and 60 cases were still pending final action at the close of the year. The fines imposed in such cases amounted to ₱33,660. Opium amounting to 547 kilograms, with an approximate value of ₱1,094,204, was seized and confiscated during the past year.

ARRASTRE PLANT.

Owing to an unusual increase in importations during 1918 as compared with those of previous years, the work of the arrastre plant has correspondingly increased. The total cargo handled during the year amounted to 324,660 tons, as against 281,653 tons in 1917 and 215,218 tons in 1916.

PROTESTS AND APPEALS.

During the year 195 protests involving the correctness of the decision of customs officers as to the classification or value of imported merchandise or the collection of certain customs charges were presented to the insular collector of customs by virtue of the provisions of section 1370 of the Administrative Code. Of this number, 32 were sustained and 58 were overruled and denied, and 105 were pending action at the close of the year. Of the number overruled, six were taken to the court of first instance on appeal, in three of which cases the decision of the insular collector of customs was sustained by the court, while the other three cases were pending action at the close of the year.

CONSULAR DUTIES.

The consular work with which the insular collector of customs is charged under the provisions of section 84 of the act of Congress of July 1, 1902, involved the shipment during the year on American vessels, including Army transports, of 1,815 seamen, of which number 205 were Americans and 1,110 were Filipinos. The total number of seamen discharged was 1,265, of which number 309 were Americans and 956 were Filipinos. Forty destitute American seamen were cared for and provided board and lodging, and 61 such persons were furnished transportation to the United States at the expense of the United States Government.

One hundred and forty-eight consular invoices and 105 invoices of returned American goods were issued during the year.

BUREAU OF INTERNAL REVENUE.

COLLECTIONS.

The following is a summary of the collections made by the bureau of internal revenue in 1918 as compared with 1917:

Item.	1917	1918
Excise tax:		
Domestic—		
Distilled spirits.....	\$4,189,753.74	\$4,476,835.70
Fermented liquors.....	293,760.00	211,920.00
Manufactured tobacco.....	270,952.74	374,528.48
Cigars.....	262,629.54	314,110.01
Cigarettes.....	5,385,223.82	5,536,566.72
Matches.....	145,340.00	64,248.00
Wines and imitations.....	164,476.15	158,658.04
Total.....	10,712,135.90	11,136,866.95
Coal and coke.....	1,608.01	15,949.63
Imported—		
Distilled spirits.....	253,865.20	179,066.07
Fermented liquors.....	8,068.63	8,695.65
Manufactured tobacco.....	199,421.45	224,528.46
Cigars.....	2.00	93.91
Cigarettes.....	39,278.90	66,066.76
Matches.....	236,854.81	367,638.45
Wines and imitations.....	85,142.59	70,085.03
Skimmed milk.....	27.00	497.20
Total.....	822,660.58	916,691.53
Kerosene or petroleum.....	712,360.83	518,031.47
Naphtha, gasoline, and all lighter products of distillation.....	309,376.56	256,445.98
Lubricating oils.....	71,334.97	92,572.72
Total.....	1,093,072.36	867,050.17
Opium.....	2,730.18	400.00
Coal and coke.....	157,186.55	119,047.76
Cinematographic films.....	40,350.96	29,732.03
Playing cards.....	100,025.05	12,103.33
Total excise taxes.....	12,929,769.68	13,207,841.40
License, business, and occupation taxes:		
Brewers.....	2,762.50	2,430.00
Distillers.....	13,185.00	13,735.00
Rectifiers.....	5,135.00	4,950.00
Retail liquor dealers.....	31,771.00	31,525.50
Retail vino dealers.....	153,544.84	254,784.90
Wholesale liquor dealers.....	60,318.50	87,358.75
Retail dealers in fermented liquors.....	31,477.00	41,463.25
Retail dealers in tuba, basi, and tapuy.....	238,234.75	282,436.19
Wholesale dealers in fermented liquors.....	12,573.00	15,121.00
Dealers in manufactured tobacco.....	236,566.25	285,274.90
Manufacturers of chewing and smoking tobacco.....	1,852.47	1,515.00
Manufacturers of cigars and cigarettes.....	3,152.50	2,828.50
Wholesale peddlers of alcoholic and tobacco products.....	4,531.00	6,326.00
Retail peddlers of alcoholic and tobacco products.....	9,796.50	17,144.10
Manufacturers of and wholesale dealers in motor spirits, mineral and lubricating oils.....	9.00	.....
Retail leaf tobacco dealers.....	112,877.25	160,160.00
Total.....	922,786.56	1,207,082.09

Item.	1917	1918
License, business, and occupation taxes—Continued.		
Merchants and manufacturers.....	P8,900,490.86	P12,803,640.29
Printers, publishers, and lithographers.....	9,914.80	21,063.63
Common carriers.....	88,367.96	109,911.00
Contractors, warehousemen, and others.....	153,872.84	209,474.09
Peddlers of merchandise.....	490,742.89	630,967.95
Total.....	9,633,389.35	13,775,060.35
Stockbrokers.....	6,785.00	7,280.00
Real-estate brokers.....	13,665.00	16,075.00
Customs and immigration brokers.....	1,915.00	2,210.00
Pawnbrokers.....	22,975.00	27,350.00
Theaters, cinematographs, and concert halls.....	23,869.40	23,303.60
Circuses.....	1,317.50	1,535.00
Billiard rooms.....	20,410.19	24,123.69
Lawyers, medical practitioners, architects, land surveyors, engineers, and public accountants.....	64,851.76	71,661.84
Chiropractists, manicurists, tattooers, and masseurs.....	1,513.00	1,577.50
Pharmacists and barbers.....	12,833.75	14,888.75
Race tracks.....	8,490.00	8,790.00
Merchandise brokers.....	47,374.75	68,378.78
Cockpits.....	560,574.43	718,857.13
Cockfights.....	172,031.86	185,034.90
Opticians and dental surgeons.....	11,365.50	13,373.80
Milwive, cirujanos ministrantes in medicine and dentistry.....	2,680.19	3,038.29
Procuradores judiciales, agentes de negocios, insurance agents, and subagents.....	19,235.00	19,393.89
Photographers, engravers, and professional appraisers or connoisseurs of tobacco, etc.....	13,468.50	15,422.50
Veterinarians, vehicles and bicycles repair shops.....	170.00	110.00
Money lenders.....	28,650.00	29,317.59
Signs, signboards, and billboards.....	7,555.54	6,196.89
Total.....	1,041,688.37	1,257,857.37
Banks and bankers.....	523,728.23	785,139.59
Insurance companies.....	53,288.58	77,030.83
Mines.....	28,685.70	23,873.40
Registered dealers in prohibited drugs.....	2,509.95	4,373.38
Sponge fisheries.....	602.61	141.62
Pearl fisheries.....	6,556.25	5,343.73
Weights and measures.....	159,631.69	172,017.20
Total license, business, and occupation taxes.....	12,372,847.29	17,307,919.48
Cedulas.....	5,351,065.00	5,075,486.59
Franchise taxes.....	247,748.90	273,195.14
Income tax.....	1,182,888.33	2,571,575.29
Documentary stamp tax.....	382,951.40	505,614.87
Inheritance tax.....	5,824.93	75,562.06
Incidental revenue:		
United States internal revenue collected in the Philippines.....	1,253,851.23	1,919,753.11
United States internal revenue collected in the United States.....		98,977.54
Revenue from public forests.....	536,328.17	650,661.06
Miscellaneous stamp collection.....	297.81	116.29
Service income:		
Justice of the peace fees.....	453,037.07	443,548.37
Total stamp and cedula collections.....	34,716,609.81	42,130,280.71
Other collections:		
Mining fees.....	1,547.44	450.00
Tobacco inspection fees.....	170,321.78	210,019.32
City of Manila taxes, charges, etc.....	5,048,891.95	6,167,413.43
Grand total.....	39,937,370.96	48,508,163.65

It can be seen from the foregoing table that the total amount collected during the year 1918 was P48,508,163.65, as compared with a total collection for the year 1917 of P39,937,370.96, an increase of P8,570,792.69, or 21.46 per cent.

APPORTIONMENT OF INTERNAL-REVENUE TAXES AND OTHER COLLECTIONS MADE BY THE BUREAU OF INTERNAL REVENUE.

Pursuant to the provisions of the internal-revenue allotment law (chap. 19 of Act 2711), internal-revenue collections accrue to the various treasuries as shown by the following statement. It will be seen also from the statement that the bureau of internal revenue, aside from collecting strictly internal-revenue taxes, also undertakes the collection of divers taxes, fees, and charges provided by other laws.

Item.	1917.		
	Accruing to—		
	Insular.	Provincial.	Municipal.
Excise tax:			
Manufacturers of alcohol and tobacco products—			
Domestic.....	P10,712,135.99		
Imported.....	822,660.58		
Coal and coke—			
Domestic.....	1,608.01		
Imported.....	157,186.55		
Kerosene or petroleum, imported.....	712,360.83		
Naphtha, gasoline, etc., imported.....	309,376.56		
Lubricating oils, imported.....	71,334.97		
Cinematographic films, imported.....	40,350.96		
Playing cards, imported.....	100,025.05		
Opium.....	2,730.18		
License, business and occupation taxes:			
Dealers in alcohol and tobacco products.....	684,551.81		P238,234.75
Merchants, manufacturers, common carriers, etc.....	9,633,389.35		
Occupations, trades and professions.....	240,509.99		801,178.38
Banks and bankers.....	523,728.23		
Insurance companies.....	53,268.58		
Mines.....	28,685.70		
Registered dealers in prohibited drugs.....	2,509.95		
Sponge fisheries.....	120.52	P241.05	241.04
Pearl fisheries.....		6,556.25	
Weights and measures.....		79,815.85	79,815.84
Cedulas.....		3,978,140.75	1,372,924.25
Franchise taxes.....	149,517.16	25,871.29	72,360.45
Income taxes.....	1,182,888.33		
Documentary stamp tax.....	382,951.40		
Inheritance tax.....	5,824.93		
Incidental revenue:			
United States internal revenue collected in the Philippines.....	1,253,851.23		
Revenue from public forest.....	536,328.17		
Miscellaneous stamp collection.....	297.81		
Service income:			
Justice of the peace fees.....	422,585.28	135.00	30,316.79
Total.....	28,030,778.12	4,090,760.19	2,595,071.50
Other collections:			
Mining fees.....	1,547.44		
Tobacco inspection fees.....	170,321.76		
City of Manila taxes, charges, etc.....			5,048,891.95
Internal revenue allotment.....	(3,164,063.55)	1,582,041.78	1,582,041.77
Grand total.....	25,038,563.77	5,672,801.97	9,226,005.22

Item.	1918.		
	Accruing to—		
	Insular.	Provincial.	Municipal.
Excise tax:			
Manufacturers of alcohol and tobacco products—			
Domestic.....	P11,136,866.95		
Imported.....	916,691.53		
Coal and coke—			
Domestic.....	15,949.63		
Imported.....	119,047.76		
Kerosene or petroleum, imported.....	518,031.47		
Naptha, gasoline, etc., imported.....	256,445.98		
Lubricating oils, imported.....	92,572.72		
Cinematographic films, imported.....	29,732.03		
Playing cards, imported.....	122,103.33		
Opium.....	400.00		
License, business and occupation taxes:			
Dealers in alcohol and tobacco products.....	924,645.90		P282,438.19
Merchants, manufacturers, common carriers, etc.....	13,775,060.25		
Occupations, trades and professions.....	277,653.05		960,204.22
Banks and bankers.....	785,139.59		
Insurance companies.....	77,030.83		
Mines.....	23,873.40		
Registered dealers in prohibited drugs.....	4,373.38		
Sponge fisheries.....	28.34	P56.64	56.64
Pearl fisheries.....		5,343.75	
Weights and measures.....		86,008.60	26,008.60
Cedulas.....		3,781,001.50	1,293,894.09
Franchise taxes.....	164,344.65	27,165.47	81,685.02
Income taxes.....	2,571,575.29		
Documentary stamp tax.....	505,614.87		
Inheritance tax.....	75,562.06		
Incidental revenue:			
United States internal revenue collected in the Philippines.....	1,919,753.11		
United States internal revenue collected in the United States.....	96,977.54		
Revenue from public forest.....	630,691.66		
Miscellaneous stamp collection.....	116.29		
Service income:			
Justice of the peace fees.....	416,168.84	534.50	26,845.08
Total.....	35,478,450.45	3,960,710.46	2,751,119.80
Other collections:			
Mining fees.....	450.00		
Tobacco inspection fees.....	210,019.52		
City of Manila taxes, charges, etc.....			6,167,412.42
Internal-revenue allotment.....	(3,164,063.55)	1,532,041.78	1,582,041.77
Grand total.....	32,524,836.42	5,482,752.24	10,500,574.99

COST OF COLLECTION.

The net cost to the insular government of making the above collections during the year 1918 was P619,620.41, as compared with P603,440.31, the cost during 1917, or an increase of P16,180.10. The cost of collection for each peso has decreased from year to year—2.64 centavos in 1913, 2.45 centavos in 1914, 2.07 centavos in 1915, 1.87 centavos in 1916, 1.51 centavos in 1917, and 1.23 centavos in 1918, the total collections for this last year being P48,508,163.65.

ALCOHOL PRODUCTS.

Distilled spirits.—The total output from registered distilleries during the calendar year 1918 was 15,931,402 proof liters, in comparison with 15,073,756 proof liters in 1917, an increase of 857,644 proof liters. The quantity of denatured alcohol used for industrial purposes was 867,971 proof liters, as compared with 966,549 proof liters so consumed in 1917.

On December 31, 1918, there were in operation throughout the islands 81 registered stills of modern type, as compared with 80 in 1917, 80 in 1916, 75 in 1915, 79 in 1914, and 75 in 1913. One hundred and five illicit stills were captured by internal-revenue agents during the year 1918, of which 8 were

captured in Cagayan, 1 in the Mountain Province, 59 in Pangasinan, 14 in Samar, 4 in Surigao, 18 in Tayabas, and 1 in Zambales. During the year 1917 there were seized 158 illicit stills.

Wines.—There were removed for domestic consumption during the fiscal year 1918, 1,602,346 gauge liters of still wines and imitation wines, as compared with 1,599,924 gauge liters removed during 1917.

Taxes to the amount of ₱70,085.03 were collected on imported wines and imitation wines in 1918, as against ₱85,142.59 during the preceding year.

Fermented liquors.—The following comparative statement shows the quantity in gauge liters of domestic and imported beer on which taxes were collected, as well as the quantity exported free from taxes during the fiscal years 1917 and 1918:

	1917	1918
	<i>Gauge liters.</i>	<i>Gauge liters.</i>
Domestic.....	5,875,200.00	4,236,200.00
Imported.....	161,372.60	173,913.00
Total.....	6,036,572.60	4,410,113.00
Exported.....	93,274.40	121,083.60

TOBACCO PRODUCTS AND MATCHES.

Smoking and chewing tobacco.—The following comparative statement shows the quantities of domestic smoking and chewing tobacco on which taxes were collected during the fiscal years 1917 and 1918:

Kind.	1917	1918
	<i>Kilos.</i>	<i>Kilos.</i>
Smoking tobacco.....	296,130	450,176
Chewing tobacco.....	192,767	211,393
Total.....	488,897	661,569

Taxes were collected also on 446,723 kilos of imported smoking and chewing tobacco in 1918 and on 389,869 kilos in 1917. During the fiscal year 1918, 2,617,629 kilos of stripped and partially manufactured tobacco were exported, as compared with 624,941 kilos during 1917.

In addition to the domestic smoking and chewing tobacco consumed in these islands on which the tax was paid, the exports of smoking tobacco during the fiscal year 1918 amounted to 35,924 kilos, in comparison with 42,817 kilos during 1917.

Cigars.—The total production of cigars during the year 1918 was 485,674,450, in comparison with 412,138,207 in 1917, or an increase of 73,536,243. Of the first number, 117,651,468 were consumed in the Philippines, 103,151,729 were exported to foreign countries, and 264,871,253 were shipped to the United States, as against 104,460,749, 91,553,148, and 216,124,310, respectively, in 1917.

Through the active cooperation of an effective advertising campaign directed by the Government, the Manila cigar has taken a firm foothold in the American market. Cigar exportations to the United States rose gradually from 114,006,745 in 1916, the year when the tobacco-inspection law, Act 2613, was passed, to 216,124,310 in 1917 and 264,871,253 in 1918. The average price per thousand paid for Manila cigars shipped to the United States in 1918 was ₱43.66, as compared with ₱38.25 paid in 1917.

Exportations of leaf tobacco showed a decrease in 1918 in comparison with those corresponding to 1917, the number of kilos for the first year being 2,957,264 and that for the latter year 3,283,607. The greater number of cigars exported in 1918 and the limited quantity of the 1916 and 1917 tobacco crops are responsible for this condition.

Cigarettes.—The total production during the year was 4,720,005,675 cigarettes, as compared with 4,540,519,812 during the preceding year. Of the first number, 4,600,980,458 were consumed in the islands, 114,535,147 were exported to foreign countries, and 4,490,070 were shipped to the United States, in comparison with 4,482,685,125, 52,278,522, and 5,556,165, respectively, for the fiscal year 1917.

Matches.—The quantity of matches consumed in the islands during the year was 1,079,716 gross boxes, of which 160,620 gross boxes were of domestic manufacture and 919,096.13 were imported, as compared with 955,487.03 for 1917, of which 363,350 gross boxes were of domestic manufacture and 592,137.03 gross boxes were imported.

LICENSE, BUSINESS, AND OCCUPATION TAXES.

Dealers in alcohol and tobacco products.—There were collected as privilege taxes during the fiscal year 1918 ₱1,207,082.09, as against ₱922,786.56 collected during the fiscal year 1917. Of this amount, 3.1 per cent was paid by dealers in distilled and manufactured liquors; 36.9 per cent by dealers in tobacco products, 28.1 per cent by dealers in beer, tuba, basi, tapuy; and 4 per cent by manufacturers and peddlers of liquors and tobacco.

Merchants, manufacturers, and common carriers.—There were collected as percentage taxes during the fiscal year 1918 ₱13,775,060.25, as against ₱9,633,389.35 collected during the fiscal year 1917. Of this amount, 97.5 per cent was paid by merchants, manufacturers, and peddlers; 0.8 per cent by common carriers; and 1.7 per cent by publishers, contractors, warehousemen, and restaurants.

The increase of ₱4,141,670.90 in percentage tax collections is a reflection of the high war prices and increased prosperity of the country, and shows an advance in the volume of internal trade of ₱414,167,090.

Occupations, trades, and professions.—There were collected as privilege taxes on occupations during the fiscal year 1918 ₱1,257,857.37, as against ₱1,041,688.37 during the year 1917. Of this amount, 71.9 per cent was paid by the proprietors of cockpits and 28.1 per cent by lawyers, doctors, civil engineers, surveyors, photographers, and other occupation-tax payers. Pursuant to the provisions of the internal-revenue law, the privilege-tax collections from owners of cockpits and the taxes on cock fights accrue intact to the treasuries of the various municipalities in which such taxes are collected. Seven hundred and fifty-nine municipalities and townships availed themselves of the provisions of the law authorizing the imposition by municipal councils of additional taxes on cockpits. The rate of the additional privilege taxes thus imposed ranges from ₱2 to ₱10,000 per annum. There were 86 municipalities, townships, and municipal districts in which no cockpit tax receipts were issued during the period covered by this report.

Banks and bankers.—The following comparative statement, based upon taxes assessed and collected, shows the average amount of capital employed by, average amount of deposits with, and average amount of circulation of, banks during the period from July 1, 1916, to June 30, 1917, and from July 1, 1917, to June 30, 1918:

	July 1, 1916, to June 30, 1917.	July 1, 1917, to June 30, 1918.
Average capital.....	₱16,448,612.16	₱24,618,186.22
Average deposits.....	48,860,718.13	99,512,419.15
Average circulation.....	6,046,159.83	9,895,504.04

Insurance companies.—The following table, based on tax assessments rendered, shows the total amount of each kind of insurance on which premiums were paid, and the average rate of premiums paid during the calendar years 1916 and 1917:

	Total amount of insurance, 1916.	Average rate of premium.	Total amount of insurance, 1917.	Average rate of premium.
		Per cent.		Per cent.
Fire.....	₱231,437,099.54	0.92	₱258,440,911.00	0.87
Marine.....	136,398,797.29	.64	413,129,294.71	.6
Life.....	30,516,358.00	.....	29,063,172.75	.....
Accident.....	916,500.00	.71	810,200.00	1.35
Fidelity and surety.....	14,806,654.16	1.06	42,045,867.09	.54
Typhoon and earthquake.....	3,595,040.00	.38	3,192,818.37	.33
Motor cars.....	564,285.00	3.97	642,598.00	4.19
War (marine).....	2,075,000.00	.49	3,065,200.00	.73

CEDULAS.

There were collected from the sale of cedulas during the year ₱5,075,485.50, as compared with ₱5,351,065 during the preceding year, a decrease of ₱275,579.50. A larger collection from cedula taxes was realized in 1917 than that made in 1918, because of the cedula campaign conducted under the direction of the bureau of internal revenue. There were sold 50,725 less cedulas during the year than during 1917.

FRANCHISE TAXES.

Of the amount of franchise taxes collected, ₱164,344.65 accrued to the insular treasury, ₱105,504.26 to Manila and other municipal treasuries, and ₱3,346.23 to provincial treasuries.

INCOME TAX.

Under the present income-tax law (act of Congress of Sept. 8, 1916, as amended by act of Oct. 3, 1917) there were collected ₱2,571,575.29 as income tax during the calendar year 1918 as against ₱1,182,888.33 collected during the calendar year 1917, an increase of ₱1,388,686.96, or 117.4 per cent. Unlike that of the year 1917, this increase in collection was not principally due to the favorable changes in the law, but rather to the more prosperous condition, enabling corporations and individuals to greatly increase their earnings and in like ratio their tax liability, and to better understanding of the law on the part of the taxpaying public.

PEARL FISHING.

Under the provisions of Act No. 2604, there was collected during the year covered by this report the amount of ₱2,343.75, which accrues intact to the respective provincial treasuries where collected.

SPONGE FISHING.

Under the provisions of Act No. 2584 there was collected the amount of ₱141.62, of which 20 per cent accrues to the insular treasury, 40 per cent to the provincial treasuries, and 40 per cent to the municipal treasuries concerned.

BUREAU OF PRINTING.

VOCATIONAL TRAINING.

The vocational-training feature of the work of the bureau of printing as described in previous annual reports was continued during the period covered by this report. The various classes were maintained with a sufficient quota to provide for all requirements of the service, but it is necessary, owing to the lack of skilled workmen in the local field, that the lower classes be augmented during the current year in order to provide competent craftsmen for future needs. In all, 49 advances were made by apprentices and junior craftsmen during the year.

PERSONNEL.

There were 434 employees on the rolls of the bureau of printing on December 31, 1918. Of these, 427, or 98.4 per cent, were Filipinos, and 7, or 1.6 per cent, Americans.

FISCAL OPERATION.

The product of the bureau for the fiscal year 1918, as during the previous year, was charged at the same uniform scale of prices, the total amounting to ₱1,234,739.29. During that period the cost of operation was ₱1,052,664.97.

The work of the bureau was executed under 11,989 work orders, of which 7,206, amounting to ₱522,121.60, were for the insular government; 3,089, amounting to ₱283,756.83, for the provincial governments, including the city of Ragulo; 905, amounting to ₱31,196.78, for the city of Manila; and for other government offices, the Federal Government, and outside parties, 789, amounting to ₱147,075.17.

APPROPRIATION.

Act No. 2727, for the fiscal year 1918, provided the bureau of printing with a net appropriation of ₱720,000. This sum, although rigid economy was exercised in all of the manufacturing divisions and careful scrutiny was given to orders for all classes of printing and binding, particularly stock forms, was not sufficient to cover the expenses during the year, and this bureau made appeal to the emergency board and to the Philippine Legislature for additional allotments amounting to ₱200,100.

The items of deficiency and emergency appropriations were caused by the considerable increase in production; by substantial increases in the first cost of materials and supplies and the incidental enormous freight charges; by the large increase in the estimated amount of overtime and night work necessitated by the printing of the Philippine census forms, Philippine reports, Philippine council of national defense requirements, emergency printing for departments and bureaus occasioned by new legislation, and by the large amount of printing incident to Red Cross propaganda. As all of the foregoing were unforeseen contingencies, obviously they could not be included in the estimates for 1918.

Considering the bureau of printing as a producing establishment, the additional amounts requested over the appropriations for 1918 are, strictly speaking, not true deficiencies, but merely the investment of additional capital needed to meet a greatly increased output.

Respectfully submitted.

ALBERTO BARRETTO, *Secretary of Finance.*

The GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS,
Manila.

REPORT OF THE SECRETARY OF JUSTICE.

DEPARTMENT OF JUSTICE,
Manila, P. I.

SIR: I have the honor to submit a report of the department of justice for the fiscal year ending December 31, 1918.

JUDICIARY.

SUPREME COURT.

On September 5, 1918, Justice Frederick C. Fisher tendered his resignation, and the same having been accepted, Hon. Percy M. Moir, a judge of first instance since 1907, was appointed on November 21, 1918, to succeed him.

During the year there were 1,316 cases filed in the supreme court, as compared with 1,068 cases filed during the previous year, making an increase of 248 cases. During the same period there was an increase of 542 in the number of cases disposed of and a decrease of 810 in the number of cases pending at the end of the fiscal year.

The business transacted by the supreme court during the year 1918, as reported by the clerk of the supreme court, was as follows:

Cases at the close of business Dec. 31, 1917, inclusive:

Civil.....	961
Criminal.....	239
	<u>1,200</u>

Cases filed during the period Jan. 1, 1918, to Dec. 31, 1918, inclusive:

Civil.....	772
Criminal.....	544
	<u>1,316</u>

Cases disposed of during the said period:

Civil.....	921
Criminal.....	451
	<u>1,372</u>

Cases pending decision at the close of business, Dec. 31, 1918:

Civil.....	335
Criminal.....	55
	<u>390</u>

Cases docketed but not submitted for hearing:

Civil.....	477
Criminal.....	277
	<u>754</u>

Bar examination:

Applicants admitted (all Filipinos).....	820
Present at examination.....	804
Passed the examination.....	123

Notaries public appointed by the supreme court during the period Jan. 1 to Dec. 31, 1918.....

48

Fees, fines, and court costs and bar examination fees collected during the said period.....

P28,721.80

COURTS OF FIRST INSTANCE.

Three new judges were appointed during the year. Hon. Diego Gloria, who was assistant attorney general since 1901, was appointed on February 13, 1918, judge of the second judicial district. Hon. Louis M. Southworth, a practicing attorney, was appointed judge of first instance for the twenty-third judicial district on June 20, 1918. Assistant Director of Posts Primitivo San Agustin was appointed auxiliary judge for the second group of judicial districts on July 10, 1918.

These appointments were made necessary because of the resignations of Hon. John S. Powell, judge of the twenty-third judicial district, effective May 1, 1918; of Hon. William E. McMahon, judge, eleventh judicial district, effective June 13, 1918; and Hon. Carter D. Johnston, judge, twenty-first judicial district, effective July 1, 1917.

Hon. Ponciano Reyes, late judge, twenty-sixth judicial district, died on Christmas eve.

During the fiscal year 1918, there were 15,425 cases filed in the various courts of first instance throughout the islands, as compared with 16,020 cases filed during the fiscal year 1917. During the same period, 13,213 cases were disposed of, as compared with 14,987 cases disposed of during the fiscal year 1917. The number of cases undisposed of at the end of the fiscal year 1918 was 14,888 as against 12,980 cases pending at the close of the fiscal year 1917.

The amount received as costs, fees, and fines by the various clerks of court during the year was ₱229,789.91, as compared with ₱228,427.48 received during the calendar year 1917. During the same period the amount deposited in the various courts of first instance subject to refund amounted to ₱405,612.55, as compared with ₱256,772.10 deposited during the year previous.

The following tables gives a summary of the business handled by the courts of first instance, including the city of Manila, during the year 1918:

Civil cases.

(a) Cases pending on Jan. 1, 1918:	
1. Ordinary civil cases.....	4, 668
2. Probate cases.....	3, 999
3. Land-registration cases.....	850
Total pending.....	9, 542
(b) Cases filed during the year:	
1. Ordinary civil cases.....	4, 257
2. Probate cases.....	1, 055
3. Land-registration cases.....	1, 339
Total filed.....	6, 651
(c) Cases decided during the year.....	
(d) Cases dismissed during the year.....	
(e) Cases pending December 31, 1918:	
1. Ordinary civil cases.....	5, 497
2. Probate cases.....	4, 414
3. Land-registration cases.....	1, 223
Total pending.....	11, 134

Criminal cases.

(a) Cases pending Jan. 1, 1918.....	3, 134
(b) Cases filed during the year.....	8, 774
(c) Cases decided during the year.....	4, 648
(d) Cases dismissed during the year.....	3, 506
(e) Cases pending Dec. 31, 1918.....	3, 754

JUSTICES OF THE PEACE COURTS.

The following is a résumé of the business transacted by the justices of the peace throughout the islands during the year 1918:

Civil cases.

Number of cases pending Dec. 31, 1917.....	1,426
Number of cases filed during the year 1918.....	11,791
Number of cases dismissed during the year.....	3,657
Number of cases decided during the year.....	8,713
Number of cases pending Dec. 31, 1918.....	898

Criminal cases.

Number of cases pending Dec. 31, 1917.....	6,923
Number of cases filed during the year 1918.....	70,496
Number of cases dismissed during the year.....	12,181
Number of cases decided during the year.....	58,330
Number of cases pending Dec. 31, 1918.....	6,908
Costs, fees, and fines collected.....	P362,995.25

NOTE.—The above data are not complete. The Department of Mindanao and Sulu, the Provinces of Palawan and Bukidnon not being included.

GENERAL LAND-REGISTRATION OFFICE.

During the calendar year 1918 there were filed 1,317 ordinary land-registration cases and 27 cadastral cases, as compared with 977 ordinary land-registration cases and 22 cadastral cases, respectively, filed during the calendar year 1917. During the same period there were instituted 19 civil reservation cases as against 33 cases instituted during the previous year.

The following table shows the distribution, by Provinces and the city of Manila, of ordinary applications for registration of titles to real property filed in the general land-registration office up to December 31, 1918:

Provinces.	Number of applications filed during fiscal years—						Total.
	1903 to 1914, inclusive.	New fiscal year 1914	1915	1916	1917	1918	
1. Abra.....	14	1	4	5	6	5	35
2. Albay.....	170	15	10	12	4	2	213
3. Antique.....	18	1	3	1	1	1	28
4. Batan.....	193		6	6	6	7	218
5. Batangas.....	134	20	29	14	17	24	238
6. Batanes.....		1					1
7. Bohol.....	176	11	5	4	2	3	201
8. Bulacan.....	437	18	32	42	67	56	652
9. Cagayan.....	77	2	19	5	6	3	112
10. Camarines.....	139	6	10	9	11	21	196
11. Capiz.....	40	4	9	13	17	9	92
12. Cavite.....	170	1	8	8	6	15	208
13. Cebu.....	301	13	26	16	11	15	382
14. Ilocos Norte.....	92	3	4	16	25	11	151
15. Ilocos Sur.....	62	1	7	9	7	3	89
16. Iloilo.....	383	25	10	14	7	7	446
17. Isabela.....	48	8	1	13	6	4	80
18. Laguna.....	307	67	70	80	76	119	719
19. Leyte.....	301	14	33	18	6	4	376
20. Manila.....	2,547	192	117	67	52	59	3,034
21. Mindoro.....	103	7	9	12	16	8	155
22. Misamis.....	27	10	3	2	2	3	47
Agusan.....	63		8		1		72
Bukidnon.....							
Cotabato.....	208		2	6	8	7	231
23. Davao.....	183	1	7	29	30	13	263
Jolo.....	114		1	1	3		119
Lanao.....	22			8	2		32
Zamboanga.....	138	2	6	13	7	23	189
24. Montañosa.....	78	7	7	47	3	4	217
25. Nueva Ecija.....	363	66	91	118	130	172	940
26. Nueva Vizcaya.....	26	10	11	3	2	2	53
27. Negros Occidental.....	425	61	63	18	13	6	586
28. Negros Oriental.....	74	19	24	9	7	5	138
29. Palawan.....	12	4	2	7	11	1	37
30. Pampanga.....	361	41	57	48	43	73	623
31. Pangasinan.....	270	56	47	77	116	322	888
32. Rizal.....	510	14	40	22	32	49	667
33. Romblon.....	13		2			1	16
34. Samar.....	132	8	15	11	3	6	175
35. Sorsogon.....	165	4	10	8	4	5	196
36. Surigao.....	41		1	2	1	1	46
37. Tarlac.....	392	49	60	67	90	130	788
38. Tayabas.....	200	48	99	94	99	108	698
39. Union.....	89	19	20	14	13	9	164
40. Zambales.....	120	2	8	12	8	6	156
Total.....	9,797	902	996	970	977	1,317	14,959

The total number of applications for registration of title filed during the fiscal year 1918 by the insular, provincial, and municipal governments, under acts 496, 926, and 2259, is as follows:

Filed by the insular Government under—

Act No. 496.....	0
Act No. 926, sec. 61 (cadastral docket).....	2
Act No. 2259 (cadastral act).....	25

Total.....	27
Filed by provincial governments.....	5
Filed by municipal governments.....	54

Grand total..... 86

The following tabulated statement, by Provinces, including the city of Manila, shows the total number of cadastral cases filed up to December 31, 1918, and the approximate number of lots included therein:

	Number filed during fiscal years—						Total.	
	1907 to 1916.		1917		1918			
	Cases.	Approximate number of lots.	Cases.	Approximate number of lots.	Cases.	Approximate number of lots.	Cases.	Approximate number of lots.
1. Albay.....	2	1,728					2	1,728
2. Bataan.....	3	1,475	1	3			4	1,478
3. Cagayan.....	2	3					2	3
4. Camarines.....	1	10	1	10			2	20
5. Cavite.....	3	993					3	993
6. Cebu.....	12	12,562					12	12,562
7. Ilocos Norte.....	7	6,418					7	6,418
8. Ilocos Sur.....	1	13					1	13
9. Iloilo.....	30	23,810					30	23,810
10. Sulu.....					1	639	1	639
11. Laguna.....			1	443			1	443
12. Leyte.....	2	155			1	2	3	157
13. Manila.....	26	2,842	3	475	9	1,529	38	4,846
14. Mindoro.....	2	92					2	92
15. Misamis.....			1	1			1	1
16. Nueva Ecija.....	5	2,584	2	1,783			7	4,367
17. Nueva Vizcaya.....	1	492					1	492
18. Occidental Negros.....	13	14,040	2	1,945	2	1,839	17	17,824
19. Oriental Negros.....					7	6,660	7	6,660
20. Palawan.....	6	574					6	574
21. Pampanga.....			7	6,289	7	6,877	14	13,166
22. Pangasinan.....	32	25,986	1	1			33	25,987
23. Rizal.....	7	3,832					7	3,832
24. Tarlac.....	5	1,809	2	2,136			7	3,945
25. Tayabas.....	1	12	1	1			2	13
26. Union.....	1	1					1	1
27. Zamboanga.....	10	5,922					10	5,922
Total.....	172	104,913	22	13,087	27	17,536	221	134,536

Of the 1,317 ordinary applications filed during the year 1918, 59 relate to property situated in the city of Manila, with an assessed value of ₱967,427, and 1,258 to property situated in the Provinces, with an assessed value of ₱5,423,114.23.

The following is a summary of the assessed value of the property covered by the applications filed for registration during the year 1918, and the preceding six years:

Manila.			Provinces.		
Fiscal year.	Cases.	Valuation.	Fiscal year.	Cases.	Valuation.
1913.....	214	₱4,951,265.00	1913.....	716	₱16,953,215.72
1914.....	104	3,834,598.98	1914.....	515	4,453,399.22
1914 (new).....	192	4,570,019.00	1914 (new).....	710	3,787,767.00
1915.....	117	2,087,087.00	1915.....	879	5,236,638.65
1916.....	67	1,480,730.00	1916.....	903	5,191,645.61
1917.....	53	459,404.00	1917.....	925	3,980,435.00
1918.....	59	967,427.00	1918.....	1,258	5,423,114.23

PUBLIC UTILITY COMMISSION.

WORK OF THE COMMISSION.

The work of the public utility commission during the year 1918 was four times greater than that of previous years. The material development of the country, the abnormal conditions created by the European war, and the enlarged activities of the Philippine government are responsible for this increase of work.

DEALINGS WITH GOVERNMENT BUREAUS AND AGENCIES.

Prior to the passage of Act No. 2694, that is, before March 9, 1917, the board of public utility commissioners had no jurisdiction over public corporations operating any form of public service except as to prescribing the form in which accounts shall be kept. However, since the enactment of said law all municipalities, Provinces, and Departments of the government of the Philippine Islands operating as public utilities were placed under the control and jurisdiction of the public utility commission, the successor of the board of public utility commissioners. The number of municipalities, Provinces, and Departments of the government operating as public utilities is as follows:

Steamers.—Department of Mindanao and Sulu; the provincial boards of Leyte, Mindoro, Cotabato, Bohol, Cebu, Agusan, Lanao, and Palawan.

Automobiles.—The Benguet Auto Line, bureau of public works.

Wharves and docks.—The municipal councils of Romblon, New Washington, Capiz, and Butuan, Agusan; the Department of Mindanao and Sulu; the provincial governments of Surigao, Bohol, Misamis, Mindoro, and Davao.

Ice.—The insular ice plant and cold storage.

Irrigation.—The municipal councils of Rosales and San Fabian, Pangasinan, Abulog, Cagayan.

Electric light.—City of Bagulo.

Water.—The cities of Manila, Cebu, and Iloilo (projected).

Sewer.—The city of Manila.

Telephones and telegraph.—The provincial boards of Nueva Ecija, Pampanga, Oriental Negros, Zambales, Bohol, Iloilo, Laguna, Misamis, Occidental Negros, Rizal, Tarlac, Tayabas, Abra, Lanao, Cotabato, and Bulacan; Bukidnon government telephone system; Ilicos Norte telephone system; provincial telephone line, Pangasinan; Zamboanga telephone system.

Pursuant to the provisions of section 23 of Act No. 2307, as amended by Act No. 2794, any person desiring to obtain a franchise from the Philippine Legislature shall first secure from the public utility commission a certificate of the public necessity and convenience of such franchise. The most important case had in this regard was that of Guillermo Lopez, applying for a certificate of public necessity and convenience of the franchise to construct, operate, and install an electric-light system in the municipalities of Naga and Goa, in the Province of Ambos Camarines. There were cases in which franchises were granted by the Philippine Legislature without first securing certificate of public convenience from the public utility commission. Acts Nos. 2769, 2700, 2750, 2770, and 2771 granted franchises to Messrs. Vicente Lopez, J. V. House, Canuto Octavio Borromeo, Vicente A. Racaza, and Lizarraga Hermanos, respectively, without any previous certificate of public necessity and convenience, but in all these acts a condition was inserted that the franchises will not be considered valid unless the grantees secure from the commission the certificate required in section 23 of the public utilities act.

SUPERVISION AND REGULATION OF PHILIPPINE PUBLIC UTILITIES.

The increase in the number of public utilities operating within the Philippine Islands and their development and progress is really great.

Rates.—All public utilities are required to file their rate schedules with the public utility commission for approval, pursuant to the provisions of subsection (d) of section 15 of Act 2307, as amended by Act 2694. Any increase, reduction, change, or alteration of any existing classification is considered illegal and unlawful without such approval. The most important rate case heard before the commission during the year 1918 was the request of the Philippine Shipowners' Association for authority to charge 75 per cent on its freight rates as already increased. The commission after due investigation decided on

May 6, 1918, not to accede to the general request of the shipowners for a uniform rate and has considered the case of each steamer separately and granted the rates justified by the profits and losses of each respective steamer. The rate cases during 1918 may be classified as follows:

Rate changes.....	50
Complaints regarding overcharges and rate changes.....	29
Changes of classification of ports.....	2

Service to the public.—All public utilities are required to render, provide, and maintain a safe, proper, and adequate service to the public. Among the important cases heard before the commission concerning objectionable practices on the part of some public utilities which were considered prejudicial to the public, there were five in which the public utility commission ordered the recording of bills of lading; the abstention from using cargo hooks in handling, loading, and unloading of leaf tobacco; the adoption of rules to prevent overcrowding of passengers in cars; and the payment of telephone rentals.

Increase of capital and issuance of stocks.—During the year 1918 only three public utilities requested approval from this commission for authority to increase their capital and to issue new stocks, these utilities being the Tayabas Light & Power Co., the Lucban Electric Light & Power Co., and the Malolos Electric Light & Power Plant Co.

DISPOSAL OF CASES.

The number of cases handled by the public utility commission was as follows:

Cases at the close of business, Dec. 31, 1917.....	33
Cases filed in 1918.....	297

Total.....	330
------------	-----

Classification of the 31 cases pending on Dec. 31, 1917:

Decisions and orders.....	29
Dismissals.....	2
Pending.....	2

Total.....	33
------------	----

Classification of the 297 cases filed in 1918:

Decisions and orders.....	127
Orders.....	34
Dismissals.....	33
Cases pending at the end of the year 1918.....	103

Total.....	297
------------	-----

BUREAU OF JUSTICE.

CHANGES IN PERSONNEL.

On July 3, 1918, Solicitor General Quintin Paredes was appointed attorney general.

Four vacancies occurred in the legal force of the office as a result of the resignation of Assistant Attorney Jose A. Santos; the appointment of Assistant Attorney Luis P. Torres to the position of judge of the municipal court for the city of Manila; the promotion of Mr. Alexander Reyes, law clerk, to the position of assistant attorney, as hereinafter stated; and the retirement, on August 22, 1918, of Assistant Attorney Robert C. Round, under the provisions of Act No. 2589.

On April 1, 1918, Mr. Manuel V. Moran was appointed assistant attorney of the bureau of justice at ₱3,000 per annum, and on September 12, 1918, Messrs. Pedro Tuason and Alexander Reyes were appointed assistant attorneys at ₱4,000 and ₱3,000 per annum, respectively. Messrs Jose A. Santos and Felipe Ismael were appointed special attorneys of the bureau of justice on July 16, 1918, and October 2, 1918, respectively, the former with assignment in the Philippine National Bank.

WORK OF THE BUREAU.

The work of the bureau of justice considerably increased during the fiscal year 1918. In the legal service of the bureau there were dispatched 6,848 cases, as compared with 5,800 cases dispatched during the year previous, making an increase of 1,048 cases. This may be explained by the great number of court cases handled in the supreme court and in the various courts of first instance in the islands and the increasing activities of the Philippine National Bank. There was, however, a decrease of 104 in the number of opinions rendered during the year, which may be accounted for by the fact that only opinions on important subjects were counted as such, those on minor legal questions being excluded.

The following is a brief statement of the business transacted by the bureau during the fiscal year 1918:

Cases in the supreme court in which the attorney general presented briefs and arguments.....	493
Cases in the supreme court in which this office appeared by motions, etc.....	689
Cases conducted in the courts of first instance of Manila.....	108
Cases conducted in the courts of first instance in the different Provinces throughout the islands by representatives of the attorney general.....	257
Cases conducted in the justice of the peace court of the city of Manila.....	1, 476
Investigations against attorneys in private practice.....	27
Other administrative investigations.....	5
Land-registration cases in which this office appeared and opposed registration.....	697
Land-registration cases examined by this office and in which no opposition was presented.....	894
Land-registration cases in which the insular government was the applicant.....	60
Civil, military, and naval reservation cases conducted by this office on behalf of the representative entities interested therein.....	28
Formal opinions rendered by the attorney general to the chief executive, heads of departments, the Philippine Legislature, chiefs of bureaus, and other officials.....	178

These opinions may be subdivided as follows:

To the Governor General, heads of departments, and the Philippine Legislature.....	66
To chiefs of bureaus.....	90
To the Postal Savings Bank.....	1
To provincial fiscals.....	10
To all other officials, including municipal officials of the Provinces not provided with fiscals.....	11
Philippine National Bank, applications for loans and mortgages passed upon.....	639
Instruments prepared for the Philippine National Bank.....	1, 200
Drafts of mortgages prepared for the Postal Savings Bank.....	52
Discharges of mortgages for the Postal Savings Bank board.....	45
Administrative circular letters issued to bureau of justice and judiciary employees, including provincial fiscals.....	62
Official routine communications received and disposed of other than opinions.....	44, 827

ADMINISTRATION OF ESTATES OF DECEASED AMERICAN GOVERNMENT EMPLOYEES.

The following is a list of American Government employees who died during the fiscal year 1918 and whose estates had to be administered by the attorney general: Victor E. Kerr, bureau of lands; Thomas C. Lindsley, department quartermaster; Ralph W. MacAdams, bureau of education; Ansel H. Barnes, police department; Charles T. Brede, department quartermaster; James Connor, bureau of posts; Robert W. Gaylor, department quartermaster; C. C. La Roche, Philippine constabulary; John M. Roberts, bureau of education; John McKearney, department quartermaster; Grover C. Sebastian, bureau of education; and Fayette J. Wood, bureau of education.

During the same period the administration of the estates of the following deceased employees was terminated: Archie S. Collins, Chris J. Holland, Fred

H. Longley, Victor E. Kerr, Michael Flaherty, Thomas C. Lindsley, and Ralph W. MacAdams.

The estates of the following deceased employees were in process of settlement at the close of the fiscal year 1918: A. R. Travers, John McKearney, Peter G. Ferrel, Grover C. Sebastian, Frank Betron, James Connors, Luther Hughes, Fayette J. Wood, Edward McClain, Robert W. Gaylor, Charles T. Brede, C. C. La Roche, Ansel H. Barnes, and John M. Roberts.

Funds, estates of deceased American employees.

Balance, Dec. 31, 1917-----	P955.51
Receipts, fiscal year 1918-----	7, 833.72
	<u>8, 339.23</u>
Disbursements, fiscal year 1918-----	6, 041.56
Balance, Dec. 31, 1918-----	2, 297.67
	<u>8, 339.23</u>

PROVINCIAL FISCALS.

The resignations of Messrs. Conrado Carballo, fiscal of Iloilo, effective June 11, 1918, and Pablo Tecson, fiscal of Tayabas, effective February 28, 1918; the transfers of Messrs. Jose Sotelo, fiscal of Bataan and Zambales, to the bureau of customs on April 2, 1918, and Pedro Tuason, fiscal of Ilocos Sur, to the bureau of justice on September 12, 1918, and the separation of Mr. Roman Espiritu, fiscal of Pangasinan, from the service on December 1, 1917, on account of age, by virtue of section 1673 of the Administrative Code, caused five vacancies in the positions of provincial fiscals. These vacancies made necessary the appointments of Mr. Juan G. Lesaca as fiscal of Batangas on February 19, 1918; Mr. Felix Samson as fiscal of Tayabas on May 14, 1918; Mr. Sixto de la Costa as fiscal of Bataan and Zambales on February 19, 1918; and Messrs. Gervasio Diaz and Roque Hofileña as fiscals of Antique and Isabel, respectively, on September 11, 1918, and the transfers of other provincial fiscals already in the service.

BUREAU OF PRISONS.

CHANGES IN PERSONNEL.

To fill the position left vacant by the resignation of the assistant director of prisons, Dr. C. G. Thompson, former Director of the Labor Bureau Dr. B. G. Monreal was appointed on October 1, 1918.

Mr. Ramon Victorio, former superintendent of the City Boys' Reformatory, was appointed assistant superintendent of the Iwahig penal colony on April 1, 1918.

Dr. C. E. Norris, chief of the prison sanitation division, resigned from the Government service to engage in private practice, and Dr. A. M. Mafialak, prison surgeon, was designated to take charge of the position temporarily.

PRISON POPULATION.

On December 31, 1918, the prison population of the Philippine Islands was distributed as follows:

Billbid Prison -----	2, 635
Iwahig penal colony-----	1, 062
Number of the colonists family-----	144
San Ramon penal farm-----	503
Working at Corregidor-----	783
Constabulary stations-----	19
Insular prisoners working at provincial jails-----	53
San Lazaro Insane Asylum-----	37
City Boys' Reformatory School-----	4
Luneta police station-----	32
Confined in provincial jails-----	1, 250
Total -----	<u>6, 463</u>

¹ Not included in total.

The total number of insular and provincial prisoners on hand on December 31, 1917, was 6,941, while on December 31, 1918, there were, as shown above, 6,463 in confinement, a decrease of 478 prisoners.

The number of insular prisoners on hand on December 31, 1917, was 5,591 and on December 31, 1918, 5,213.

The average number of insular prisoners in confinement daily during the year was 5,381.69, while the average number during the period covered by the report of the previous year was 5,618.72, a decrease of 237.03.

The number of provincial prisoners on hand December 31, 1917, was 1,350, and on December 31, 1918, 1,250, a decrease of 100.

The number of commitments by the court was 3,474, as against 3,997 for the year 1917.

Of the 3,474 prisoners committed this year, there were only 759 from the Provinces, while 2,715 were from Manila, as against 874 from the Provinces and 3,123 from Manila last year. Those committed from Manila include short-term municipal prisoners convicted of minor offenses or misdemeanors, while those from the Provinces are all insular prisoners, excepting those convicted of opium habit, who are sent to Billbid for treatment, regardless of their status. The principal crimes and those which show the greatest increase are assault, attempted theft, concubinage, corruption of minors, falsification of public documents, frustrated theft, qualified theft, robbery, and thefts.

PRISONERS' COURT.

During the period covered by this report 3,064 cases for infraction of prison regulations have been disposed of by the prisoners' court, 229 of which have been modified by the reviewing authority—the director of prisons. There have been no changes made in the personnel of the court, and the members thereof have cheerfully performed their duties.

SUBSISTENCE.

The report of the Iwahig penal colony shows an increase of about 1 centavo per capita in the item of subsistence, the total value of supplies consumed being ₱62,006.33, ₱22,549.07 of which is for purchased items, the remainder, ₱39,457.26, being the value of the colony produce, which is 62 per cent of the entire expense for subsistence, an increase of 10 per cent from the previous year.

The San Ramon penal farm reports an increase of about ₱0.0338 per capita. This is due to the increased high cost of purchased commodities and to the unsatisfactory production of the truck garden, due to three successive floods which visited San Ramon during the previous year. The issues of subsistence supplies to colonists during the year totaled about ₱40,520, 63 per cent of which represented farm products.

The average cost of prisoners' subsistence at Billbid during the year is ₱0.21628 per capital, as compared with ₱0.29908 for the last year, a decrease of ₱0.0828.

The prison vegetable garden has been instrumental to a certain extent in keeping the expense on the items of subsistence at the minimum. It supplies the prison kitchen with fresh vegetables, such as beans, lettuce, radishes, etc., at a reasonable cost.

RELIGIOUS SERVICES.

Religious services have been held each Sunday by the prison Catholic chaplain, and regular daily visits to the prisoners requiring religious attendance were made by him.

Sunday services were also conducted by volunteer Protestant ministers, which aid to encourage religious spirit among the convicts.

A number of magazines, books, and pamphlets on religious literature have been distributed among the inmates.

INDUSTRIAL DIVISION.

In spite of the unsettled condition of the market and sudden fluctuations of prices of materials used in the manufacture of our products and the scarcity of transportation facilities, it is gratifying to note that during the period covered by this report the industrial division of the bureau of prisons succeeded in making a net profit of ₱56,986.12, as against ₱55,659.70 for 1917, an increase of ₱1,326.42.

PROVINCIAL PRISONS.

Periodical reports from judges of the courts of first instance and provincial commanders of constabulary point to the fact that considerable improvement has been accomplished in the provincial prisons throughout the islands. This is nothing but the result of having experienced men in charge of the management of the jails, who have taken a course of instruction in the bureau of prisons.

A number of the jail buildings have been repaired and one or two old ones are now in process of reconstruction.

SCHOOLS.

In addition to the regular and special classes, a shorthand class (Ben Pitman) was inaugurated in the month of August, and later Spanish was introduced with favorable results.

Summary of attendance for December, 1918.

Day school (elementary) :	
Grade I.....	546
Grade II.....	570
Grade III.....	379
Grade IV.....	186
Grade V.....	121
Total.....	1,802
Night school (elementary) :	
Grade I.....	9,821
Grade II.....	2,647
Grade III.....	558
Grade IV.....	772
Grade V.....	33
Total.....	13,981
Special classes:	
Mechanical drawing.....	85
Model drawing.....	459
Shorthand.....	135
Languages: Spanish.....	152
Music.....	234
Total.....	1,064
Grand total.....	16,817

In comparison with the total attendance for the year 1917, a favorable increase, as shown in the following table, will be observed for the year 1918:

	1917	1918	Increase.
Day classes (Grades I-V).....	16,732	19,173	2,441
Night classes (Grades I-V).....	81,007	145,732	64,725
Special classes.....	4,769	8,138	3,369
Total.....	102,508	173,043	70,535

Special attention has been given to instruction on sanitation and hygiene by means of weekly lectures on these subjects.

HEALTH.

The epidemic of influenza which twice appeared all over the islands during the year was the principal cause for the alarming mortality percentage.

During the year 193 deaths occurred at Bilbid, as against 107 of the previous year, 44 of which were prisoners returned sick from Corregidor, and died within some months after arrival at Bilbid. The prison physician reports that 2,674

cases of influenza have been treated in the hospital during the year, 71 of which have developed into lobar pneumonia, causing 31 deaths.

The deaths at the various outstations were as follows:

	1917	1918
Iwahig penal colony.....	23	72
San Ramon penal farm.....	4	45
Corregidor.....	39	68

The chief causes of death among prisoners during the year covered by this report were tuberculosis and influenza. The bureau of prisons has been free from cholera during the year, and three cases of leprosy were discovered, all of whom were infected with the disease at the time of commitment. They have been transferred to the San Lazaro Hospital. Pulmonary tuberculosis continues to hold the first place in regard to morbidity and mortality among prisoners.

Eleven births occurred inside the prison during the year; all of these deliveries were made from women inmates who were in a delicate state at the time of commitment.

IWAHIG PENAL COLONY.

The construction of roads and buildings has been continued with marked progress; about 8,000 coconuts have been planted, and an increase of 44 heads in live stock is reported.

The total expense of operation of the Iwahig penal colony during the year is ₱138,823.85, while the profits for the same period are ₱62,753.79. These profits are derived from colony productions and service income.

In spite of the three successive floods suffered by the San Ramon penal farm during the year 1917, it shows a profit of ₱114,381.43, while the total expense of operation of the farm for the same period is ₱116,738.41. The item of profits includes colony productions and service income.

MISCELLANEOUS.

Compensation act.—On December 31, 1918, there were a total of 639 workmen on the compensation roll, rated as follows: 175 first class, 163 second class, and 301 third class, as against 587 of the previous year. The average number of classified workmen per month, however, during 1917 is 532.5 as against 582 for the present year. A total of ₱12,405.17 was paid to prisoners by operation of this act, as compared with ₱14,372.30 for the last year.

Executions.—The following-named prisoners have been executed during the year:

Name.	Crime committed.	Court.
Mimanga.....	Murder.....	Cotabato.
Landasan.....	Robbery with homicide.....	Jolo.
Rufino Parro.....	Murder.....	Bohol.
Aminula.....	Robbery with double murder.....	Jolo.
Abu.....	Murder.....	Cotabato.
Tadong.....	do.....	Do.
Leoncio Abajo.....	do.....	Davao.
Clemente Gampona.....	do.....	Ilocos Sur.
Roman Guillermo.....	do.....	Do.
Tomas Mangrubang.....	do.....	Do.

Escapes.—There were no escapes from Bilbid Prison during the year. Two escapes were reported from the police stations, both of whom have since been accounted for.

There had been registered six escapes from San Ramon penal farm during the year, thereby making a total of 14 prisoners at large, with the other 7 still unaccounted for in the past years.

During the period covered by this report 154 prisoners have been conditionally pardoned by his excellency the Governor General, the majority of whom were serving sentence for adultery and brigandage.

PHILIPPINE LIBRARY AND MUSEUM.

PERSONNEL.

The director has been on accrued leave since April 11, 1918, and his place was filled by the assistant director, who later resigned, effective September 1, 1918. From this date, in accordance with section 555 of the Administrative Code, the undersecretary of justice took charge of the library until the return of the director on February 26, 1919.

On September 1, 1918, Mr. Manuel de Yriarte, assistant director of the Philippine Library and Museum, left the service of the Government.

Another important loss to the library was due to the promotion to the position of assistant director of civil service on May 1, 1918, of Mr. Enrique V. Fillamor, chief of the legislative reference division.

Within the year the library has suffered a great loss through the death of Mr. Mariano Ponce, historical researcher, which occurred in Hongkong on May 23, 1918. Mr. Ponce was one of the Filipinos who took a very active and prominent part with Rizal, M. H. del Pilar, and others in the emancipation of the Philippines and carried on with them a long and persistent campaign therefor in Europe. He was thoroughly acquainted with the history of the Philippines, especially during the time of the Spanish domination and the revolution, and he rendered valuable service as special historical researcher in the Filipiniana division of the Philippine Library. His death proved to be a great loss not only to the bureau but to the country as well.

Three permanent legislative researchers—Messrs. Jose Lopez del Castillo and Manuel Ramirez, members of the Philippine bar, and Prof. Maximo M. Kalaw, chief of the department of political science of the University of the Philippines—were also appointed during the year.

ADDITIONS, DONATIONS, AND LOANS.

It is estimated that there are in the library from 120,000 to 160,000 bound volumes and from 280,000 to 340,000 unbound volumes, including manuscripts, making a grand total of from 400,000 to 500,000 pieces. In these figures are included the additions during 1918, which are more than 80,000 volumes of printed matter.

It is also estimated that the archives division contains more than 5,000,000 documents.

One of the most important acquisitions made by this bureau during the year are the following valuable manuscripts which were bought at ₱10,000.

Morga: Sucesos de las Islas Filipinas con anotaciones del Dr. José Rizal.

Rizal: Memorias de un estudiante de Manila, which has come to be considered as an autobiography of the great Filipino hero.

Rizal: Llanto y Risa.

Rizal: Mi primer recuerdo. (Fragmento de mis memorias.)

Rizal: Manila en 1872.

Schiller: William Tell. Tragedy translated from German to Tagalog by Dr. José Rizal.

Webber, Charles Julius: La Religion y los religiosos.

DONATIONS.

There are a number of volumes donated to the library and its branch in Iloilo amounting to 557, which include many valuable books. This figure does not include a considerable number of pamphlets and magazines which have also been donated during the year.

For the museum collection there were received several gifts of great value and interest; 158 paintings, photographs, and transparencies were given by the bureau of public works. Two pictures, "Arbol en el Pincio" and "La Banguera," by the famous Filipino painter, Fabian de la Rosa, were donated by him.

LOANS.

The following objects of ethnographical and historical importance were also received as temporary deposits in the museum:

From the department of anthropology, University of the Philippines, one rare jar and about 100 human skulls and skeletons; from the city of Manila, one model of Harrison Park.

REQUISITIONS FOR BOOKS.

In accordance with section 1697 of the Administrative Code of 1917 (Act No. 2711), by which the director of the Philippine Library and Museum is empowered to examine all Government purchases of books and other publications with the purpose of avoiding unnecessary duplications, there were submitted during the year 1918, 419 requisitions, which, compared with the number submitted in 1917, which was 295, shows an increase of 124. Of the 419 requisitions in 1918, 275 were forwarded to the secretary of justice for approval and five were disapproved; 114 were sent to the insular purchasing agent and approved without action of the secretary, in accordance with the department's second indorsement of October 15, 1917.

The difficulty of determining unnecessary duplications of purchases of books, because of the absence of a complete catalogue in the library of all the books of the Government, continued during the year. Special efforts have been made by the library to finish the work of listing on cards all the books now in the different bureaus or offices of the Government, but until now there are as yet many branches of the insular government which have not sent in their list or catalogue of books in their custody.

BRANCH LIBRARIES.

In the 1917 report the need and importance of branch libraries in the Provinces have been fully discussed as well as the success attained by the Iloilo branch in the first year of its establishment. Further comment on this matter, therefore, seems unnecessary on this occasion.

As a sequel to the success attained by the Iloilo Branch Library, the year 1918 could have seen the inauguration of another branch, destined to be the most important provincial branch of this institution—the Cebu branch; but because of unavoidable delays consequent on the establishment of such institutions, it was impossible to complete its organization, but within a few weeks this branch will be ready to serve the public for which it was intended.

ACT NO. 2746.

This act, passed by the Philippine Legislature on February 18, 1918, has for its purpose the sending to the United States of America of five graduates of the College of Liberal Arts, who have finished the library science course in that college, to study library science and bibliography. In accordance with this act three assistant cataloguers of this library and one from the library of the bureau of science were appointed. When these pensionados return, they will help a great deal in the organization of provincial libraries.

THE LEGISLATIVE REFERENCE DIVISION.

The division's library.

The number of books reported last year is 4,768. There are additions of 151 by purchase and 93 by gift, making a total of 5,012.

The pamphlet collection of the division reported last year was 2,351 in number and we have received this year 242, making in all 2,593 pamphlets.

Newspaper clipping is being carried on under a system adopted last year. We have had already a great use of our scrapbooks. This work is now being recognized by an appropriation of ₱960 per annum for the position of clipper, which, in the scale of salary given to the different employees of the library, carries with it great importance. It is intended that with a permanent clipper, as provided by the appropriation, this work will not be limited to local papers but be extended to all periodicals dealing with sociology, economics, political science, and statistics.

Circulation.—The collection of the division is loaned exclusively to members of the legislature, Government officials, and professors of the University of the Philippines. Our statistics show slight increase in the number of our borrowers by 117 against 108 last year; but the number of books loaned is 382 against 201, a decisive increase of about 50 per cent.

LEGISLATIVE RESEARCH WORK AND BILL DRAFTING.

After the collecting of materials and rendering them serviceable by means of what we may call library mechanics, the supplying of a comparative study of the administrative experience and legislations on other countries, either in the form of a "selected precedents" or discussions or of a digest or memorandum, and the framing of the bills themselves, are the two functions of the division which can not be overlooked, for they demand expert and professional services. Such being the characteristic of the work, the following statistics can not form an exact basis for a fair judgment of the operation of the division this year. The subject matter of the petitions and inquiries should be taken also into consideration.

The subjects dealt with by the legislative reference division under the different branches of the Government are tabulated as follows:

	Bill drafting.	Reference work.
Department of the Interior	51	21
Department of public instruction	27	3
Department of finance	9	7
Department of justice	19	19
Department of agriculture and natural resources	11	4
Department of commerce and communications	23	46
Total	140	100

And to compare the number of bills drafted and reference work done in previous years with those of 1918, the following tabulation is given:

	1916	1917	1918
Bill drafting	171	159	149
Reference work	99	105	102

THE CIRCULATING, REFERENCE, AND PERIODICAL DIVISION.

There are 20,491 readers on the double index cards, of whom 12,634 are active readers. This does not include readers in the University of the Philippines, the colleges, bureaus, or branch libraries to which books are loaned by the division. The record shows 18,396 loaned to such entities during 1918, and the selecting, listing, dispatching, and return of books to and from them have been constant.

A steady stream of American and European readers in military and civic circles have flowed out of Manila in 1918, owing to the war and abnormal conditions, greatly abridging the reading clientels among these classes, but what has been temporarily lost in this respect has been more than covered by the ever-increasing number of Filipinos who are regular book borrowers. These constitute over 8,000 men and women. They are required to be over 17 years of age and all have guarantors.

Table showing total circulation, circulating division, not including reference section, for the years 1911 to 1918.

Fiscal year July to July:

1911-1912	24,609
1912-1913	35,555

Whole year; free card system introduced:

1914	78,818
1915	112,621
1916	128,010
1917	139,121
1918	114,498

General summary of circulating division, not including reference section, by years, 1916-1918, contrasted.

	1916	1917	1918
By cards.....			
Branch and deposit libraries.....	113,046	117,915	93,805
Books issued on memorandum receipts.....	11,616	18,396	18,396
Books issued to reading room.....	1,653	1,706	1,595
Books mailed to Provinces.....	1,034	837	583
	263	215	119
Total.....	127,612	139,121	114,498

NOTE.—The decrease on circulation was 24,623 for the year. When all the factors are considered—war, epidemic disease, and loss of regular readers returning to their native countries or being deported by the Government—the 18 per cent is less than was expected. A decrease of 20 per cent was expected. Over 1,200 students of the high school were deprived of reading privileges at one stroke, the principal declining, as do other school principals, to indorse their cards and requiring a money deposit of ₱5 each.

Reference and periodical section.

Reference books on hand.....	3,365
Reference sent to Cebu Branch Library.....	65
Reference sent to Iloilo Branch Library.....	78
Reference sent to circulating division.....	71
Total.....	3,579
Bound magazines on hand.....	3,173
Bound magazines sent to Cebu Branch Library.....	45
Total.....	3,218
Subscriptions to periodicals.....	11,054
Gifts (periodicals—free copies).....	9,830
Total.....	20,884
Periodicals on hand prepared for binding.....	1,032
Unbound periodical sets sent to Iloilo Branch Library.....	6
Total.....	1,038
Periodicals collated.....	247
Readers in the reading room.....	81,021
Readers using periodicals.....	65,660
Readers using reference books.....	25,654
Readers of books from circulating division.....	518
Back numbers of periodicals consulted.....	5,298
Reference books mutilated.....	4
Reference books purloined.....	2
Periodicals mutilated.....	16
Periodicals purloined.....	11

Very respectfully,

JOSE ESCALER,
Acting Secretary of Justice.

His excellency the GOVERNOR GENERAL,
Ayuntamiento.

REPORT OF THE SECRETARY OF AGRICULTURE AND NATURAL RESOURCES.

JANUARY 1 TO DECEMBER 31, 1918.

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES,
Manila, P. I.

SIR: I have the honor to submit herewith the annual report of the department of agriculture and natural resources for the year ending December 31, 1918. During the year the activities of this department have been increased by the establishment of stock farms provided by Act 2758 of the Philippine Legislature, in force since February 23, 1918. There has not been any change in the organization of the department of agriculture and natural resources since the last report.

BUREAU OF AGRICULTURE.

A comparison of statistics compiled by the bureau of agriculture for the past six years shows conclusively that the year 1918 was a banner year for agriculture in the Philippines, all records being surpassed, not only in the money value of the crops produced, but also as to the number of hectares in cultivation and the amount of crops produced. In round numbers the total value of the six leading crops of the islands, namely, rice, abaca, sugar, coconuts, corn, and tobacco, jumped from the previous high record of ₱241,000,000 for 1917 to ₱350,000,000 for 1918, a net gain for the year of ₱109,000,000, and the highest total ever attained for Philippine agricultural products since the statistical division was established in the bureau in 1913. Compared with the average annual production for the previous five-year period, the 1918 record shows an even greater gain of ₱181,000,000 in value. Compared, likewise, with the averages for this previous five-year period, there is an increase of 371,000 hectares planted to the six leading crops mentioned above, and an increased yield in kilos and liters of 1,434,000,000. Only one crop of the six fails to show an increase in hectareage, in yield, and in value of the product. Corn showed a slight decrease in hectareage and in yield, but the value of the crop produced even then showed a satisfactory gain.

RICE.

First on the list of Philippine agricultural products for 1918 is the standard crop of rice, with an increase of 192,000 hectares in cultivation over the average of the previous five years, an increase in the yield of 1,202,000,000 liters, and an increase in value over the same period of ₱74,000,000, the 1918 totals being—hectares in cultivation, 1,368,140; liters produced, 2,684,628,000; valued at ₱135,163,375, a gain in value over the record crop of 1917 of ₱53,000,000 in round numbers. More gratifying even than the above figures is the marked advance in the average yield per hectare for 1918, which establishes a new record of 26.16 cavans. The average production for the Philippines for the previous five years was 19.41 cavans per hectare, a net gain per hectare in average production of 6.75 cavans.

ABACA.

Abaca comes next in importance, with a total area for 1918 of 512,508 hectares, which produced 166,863,644 kilos, valued at ₱92,493,223, which, compared with the previous five-year period, shows a gain of 62,000 hectares in area, 18,000,000 kilos in production, and an increase in value of ₱54,000,000.

COCONUTS.

The total area planted to coconuts in 1918 was 335,602 hectares, which yielded 346,656,535 kilos of copra, and the total value of all coconut products was ₱56,533,793. Compared in round numbers with the average for the previous five-year period, there is a gain of 73,000 hectares in area planted, 202,000,000 kilos increase in production, and ₱31,000,000 gain in the total value of all coconut products.

SUGAR.

Sugar comes next on the list with an area of 205,511 hectares planted to sugar cane, a production of crude sugar of 396,242,786 kilos and a total value of all sugar-cane products of ₱41,158,788. By comparison with the average of the previous five-year period, sugar shows a gain of 29,000 hectares under cultivation, 54,000,000 kilos in production, and ₱9,000,000 in value.

TOBACCO.

The 1918 record for tobacco shows a hectarage of 78,443, a yield of 61,555,322 kilos of leaf tobacco, worth ₱15,219,155. Compared with the same period as above, there is a gain of 18,000 hectares in area, 17,000,000 kilos in production, and ₱7,000,000 in the value of the crop.

CORN.

There were 418,386 hectares planted to corn in 1918, which produced 397,177,733 liters of shelled corn, valued, together with forage, at ₱21,372,123. Corn shows a decrease in area planted of 3,000 hectares over the five-year average and a decrease in yield of 59,000,000 liters, but a gain in value nevertheless of ₱6,000,000.

THE FOOD CAMPAIGN.

During the year the most important work of the field men of the bureau of agriculture, the agricultural inspectors, farm advisers, and their assistants was that pertaining to the food-production campaign, for which an appropriation of ₱500,000 was made by the legislature. That the efforts to increase food production have brought satisfactory results, the splendid showing for 1918 crops readily attests. The bureau of agriculture activities in this campaign were carried out through the field force by means of demonstration plots and public nurseries, through the cooperative agricultural societies and the rural-credit associations, the purchase of seed and plant materials, instruction in seed selection, soil preparation, home gardens, improved live stock and poultry breeding, public lectures, bulletins, farm publications, etc.

PEST CONTROL.

PLANT QUARANTINE.

The bureau of agriculture maintains quarantine stations at Manila and Zamboanga for plant inspection. The total number of seed and plant materials imported into Manila during the year was 15,045 and the export 7,067. The imports came mostly from Japan, China, Hawaii, and Egypt and many plants were found diseased and condemned.

COCONUT BUD ROT.

Much attention was given to the eradication of this disease in the coconut groves, especially in the Provinces of Laguna, Tayabas, and the Department of Mindanao and Sulu. The work of the inspectors was greatly facilitated by willing cooperation generally extended by coconut growers. In the Provinces of Tayabas, Laguna, and Zamboanga, including Basilan, 14,017,741 trees were inspected. Of these 6,689 were found infected with bud rot and were condemned and burned.

LOCUSTS.

During the year, little damage resulted from locust infestation, most of the Provinces remaining entirely free from the pest. Of the municipalities infested, Buluan, in Cotabato, was hard to eradicate. At the present time the archipelago is practically free from this pest.

ABACA PESTS AND DISEASES.

Inspection similar to that for bud rot in the coconut was made in many plantations during the year, and many diseased plants were found, especially in Laguna, where it was found necessary to issue General Order, No. 64, prohibiting the transportation of abaca plants to other districts not infected.

RAT EXTERMINATION.

Rats were reported to be doing heavy damage in the northern part of Camarines Province. As far as funds and facilities of the bureau permitted, poison (white arsenic) with instructions for its use was given free and rat traps were loaned to farmers. With the limited number of inspectors in the employ of the bureau, it was not possible to give this matter the necessary attention which the case required.

ANIMAL HUSBANDRY.

This important division has for its object the improvement of domestic live stock and poultry. This is done principally by the use of improved sires on the native stock. Stations are maintained at Alabang, where particular attention is given to swine and poultry; at Trinidad Stock Farm, in the Mountain Province; at La Carlota; and breeding stations in the Province of Batangas, Cebu, Iloilo, Mindoro, and Oriental Negros. Under Act 2758, stock farms have been established in Bongabong, Nueva Ecija, and Ubay, Bohol. Two other locations have been selected and will be equipped in the near future, one at Lumbang, Laguna, and the other at Bangi, Ilocos Norte.

VETERINARY DIVISION.

RINDERPEST.

The generalized epizootic of this disease, which began to assume serious proportions in 1916, appears to be gradually abating in virulence. The recorded number of cases and deaths in 1918—21,586 new cases and 15,747 deaths—can not, however, be properly compared with the 33,971 cases and 26,951 deaths reported during the preceding year because the data for the last quarter of 1918 is exceedingly incomplete, owing to the fact that the field force were dismissed at the third quarter on account of the exhaustion of funds. Our records show that during the year, 334 new outbreaks occurred, counting each municipality declared or reinfected during the year as a separate outbreak. This number has been surpassed only in 1917, when 448 towns became infected with this disease.

Use of serum.—Experience has demonstrated that the use of serum has had but little real influence in the control of rinderpest. Our veterinarians are now being instructed to employ serum only in cases where they can be reasonably sure that it will prove of some benefit.

Quarantine.—After the proper regulation of cattle importation from disease-infected countries, the next step in the control of rinderpest is the adequate enforcement of quarantines and other measures for its suppression within the country.

Immunization.—The total number of carabaos and cattle immunized during the year were 6,232. During the year 1917, 7,191 heads were immunized. The number of deaths during the immunizing period was 148, or 2.4 per cent. Since 1913 more than 36,000 animals have been immunized against rinderpest by simultaneous inoculations. Apparently less than 1 per cent of these animals afterwards contracted rinderpest.

FOOT-AND-MOUTH DISEASE.

During the year several shipments of cattle arrived badly infected with foot and mouth disease, namely, August 12, 105 heads from Saigon, French Indo-China, and later shipments from the same country on August 23, September 1, 12, and 21. As a result of these infected shipments, the general orders of the director of agriculture governing the importation of animals from French Indo-China have been amended.

FIBER DIVISION.

This division has charge of the enforcement of the fiber grading and inspection law (Act No. 2389). It also conducts experiments with Manila hemp, agave and allied fibers, kapok, cotton, and miscellaneous tropical fibers. Familiarity acquired by commercial houses dealing in fibers with the Government standards and regulations has rendered it possible to carry on the work of grading and inspection with much less friction than in previous years. The number of bales rejected after inspection was also smaller. During the year there were designated 36 grading stations and 113 grading establishments, an increase of two stations and four establishments recorded for the previous year.

The total production of hemp has been steadily increasing since 1915.

Owing to the slump in our maguery market, greater attention was given to the distribution of sisal bulbils and suckers, sisal being better suited for the stripping machine. Free distribution was limited to 1,000 plants, a fee of ₱3 being charged for every additional thousand.

PUBLICATION DIVISION.

Philippine Agricultural Review.—This is a quarterly publication, in English only, and serves as a record of the scientific experiments performed by the bureau specialists.

Philippine farmer.—This is a monthly publication, issued in both English and Spanish, a practical farm paper, principally for distribution in the Philippines.

Bulletins and Circulars.—Two new bulletins were issued during the year—Plant Propagation, by P. J. Wester, and Sugar Production, by C. W. Hines. Two circulars, Nos. 36 and 37, were also issued—The Vegetable Garden, by A. M. Burton, and Some Observations on Rats, by D. B. Mackie. Some miscellaneous publications were also issued, besides several reprints.

Library.—The library of the bureau is far from complete, but efforts are being made to increase the number of standard books on agriculture as rapidly as funds will permit.

RURAL CREDIT DIVISION.

The year 1918 was a very successful one for the rural credit cooperative associations. December 31, 1917, there were 82 incorporated associations. December 31, 1918, this number had increased to 242, distributed throughout 35 Provinces. Their total capital when incorporated was but ₱122,846, yet by December 31, 1918, this had been increased to ₱320,875. There were a total of 24,822 shareholders in these associations at the close of the year. Of these, 4,693 had borrowed ₱245,362 from their associations. Starting with a capital of ₱250 in many cases, most of these societies now count from one to three thousand pesos of their own capital, and a few control larger amounts. Fifteen associations have been granted loans equal to their paid-in capital by the Philippine National Bank on the security of their capital and the joint and several notes of the five directors. All such loans were made at 8 per cent per annum, the association in turn charging 10 per cent per annum to borrowers.

The first rural-credit association was incorporated October 19, 1916. The progress made since then is shown by the statements outlined above. Rural credit is in its infancy, but it is proving a success beyond question.

ANIMAL INSURANCE.

Act 2573, as amended, requires that at least 10,000 work animals be listed before the insurance shall become operative. Ten agents were employed for this preliminary work. The central office force was organized and recorded 139 municipalities canvassed by the agents and 8,256 work animals (nearly the number required) as listed from 10 Provinces. According to the board, the reserve fund set aside for insurance would be inadequate to guarantee 10,000 insured animals in case a serious epidemic should break out, and for this reason the board presented to the legislature an amendment to the law, asking that more funds be appropriated for insurance purposes.

RECOMMENDATIONS.

The following recommendations are hereby made:

1. That the department of agriculture and natural resources be authorized to establish, through cooperation of the bureaus of science, agriculture, lands,

and the weather bureau, a comprehensive farm survey of the archipelago, to compile information concerning farm areas, soil analysis, rainfall, and climatic conditions, etc., in connection with the division of farm statistics of the bureau of agriculture. There are many calls for information of this character and the need of the cooperation above outlined is urgent.

2. That for the best interests of the public service the matter of the location and administration of irrigation projects be placed in charge of the bureau of agriculture, leaving the construction work only to the supervision of the bureau of public works.

BUREAU OF FORESTRY.

The activities of this office have materially increased during the year not only in the ordinary work but also because of definite steps being taken to make the conservation of the forest resources an actual fact, especially in the case of protecting the mangrove swamps as much as possible under existing conditions and the effective work in clearing the way for the establishment of permanent forest reserves in Provinces where action is most urgent to save the remaining forest. Decisions of the Supreme Court of the Philippine Islands have handicapped the bureau in its laudable work to some extent, but it is hoped that this will not seriously impair the establishment of mangrove forest reserves.

WAR ACTIVITIES.

The bureau cooperated with the Army and Navy authorities in administering their forest reserves and in obtaining wood and minor products from other sources. Information was also furnished various foreign Army and Navy authorities of the allied nations and to the United States Council of National Defense.

Twenty-one Filipino forest officers joined the Philippine Guard, of which number 1 resigned; the other 20 all received commissions. One American member of the bureau was detailed to assist in the mail censor's office.

The Red Cross, the forestry regiment fund, and the Liberty loans were all subscribed liberally by both American and Filipino members of the bureau.

PERSONNEL.

The question of personnel is an exceedingly difficult one. This is especially the case because forest officers, more than almost any other class of Government employees, are subject to special hardships in working in isolated regions; deprived of the advantages of living in centers of population, compelled to spend more for food, footwear, and clothing than those Government employees whose work lies chiefly or entirely in an office; and, finally, often suffering in health from the exertions, deprivations, and exposure they undergo. A number of forest officers have resigned to accept better-paid work, and many others, both of the field and clerical personnel, desired to transfer or resign, but were refused permission.

DIVISION OF FOREST MANAGEMENT.

One hundred and eleven more caligin cases were reported in 1918 than in 1917. This increase was confined to four Provinces only, namely, Negros Occidental, Albay, Camarines, and Samar. This increase is due partly to the misunderstood propaganda for better food production, and partly due to the abnormal prices paid for abaca during the year, as in the last three named Provinces abaca constitutes the main product.

Out of the 13 forest districts, 7 were inspected by the director himself and the rest either by forest supervisors or division chiefs. These inspections have resulted in a greater efficiency on the part of the field men.

To maintain this efficiency at all times, and in order that the work of the subordinate officers in the field could be checked more frequently, three forest supervisors were appointed. On account, however, of the entrance into the Philippine Guard of one supervisor and about 20 rangers, the work planned for the supervisors could not be carried out during the year, and the remaining supervisors were obliged to attend to routine work in their respective districts.

One of the most important offenses noted during the year is the using by lumbermen of local names in classifying the timber, frequently reducing their

groups, and thus reducing the forest charges. To minimize this offense, if not to entirely eliminate it, a circular, which contains the official names of practically all important tree species, as well as their corresponding local names has recently been issued to all forest officers. These names are based on the new revised list.

But a few licensees were requested to surrender their licenses because of their being constant violators of the forest laws and regulations.

In general, the operations of the licensees were satisfactory.

Very little complaint was received during the year concerning offenses committed by nonlicensees. This decrease is attributed to increased efficiency of patrol work by forest guards.

During the year just past 608 more timber licenses were issued than in the preceding year, or a total of 2,514 in force during 1918.

Two hundred and ninety-nine more firewood licenses were issued during the year than in 1917, and the number of cubic meters cut in 1918 are 722,540, as against 407,698 in 1917. Including firewood licenses, there were 4,519 licenses in force at the end of December, 1918, or an increase of 1,046 over the previous year.

The total amount of forest charges collected during the year is ₱650,691.66, while that of 1917 was ₱536,328.17, or an increase of ₱114,363.49.

It is planned to put the tidal swamps under systematic management some time in 1919, or as soon as they can be surveyed and the question of conflicting ownerships settled. Also, as rapidly as possible, the establishment of forest and agricultural zones will be pushed through if personnel is available for such work.

The principal object of putting these swamps under systematic management is to provide an adequate and continuous supply of firewood and timber at reasonable prices.

An attempt to segregate the forest areas from grasslands in the Cagayan Valley, in order to minimize the cost of land inspection as well as to expedite the work, was made, but had to be temporarily abandoned for lack of personnel.

A working plan was prepared by Forester Oteyza, with the cooperation of two rangers for the Bagulo block and the vicinity of the mines. This plan is intended to insure a continuous supply of mine timber for the mines and firewood for the city of Bagulo.

Certain improvements have been made in the fire-protection system, and more attention has been paid during the year to cut-over forests.

A shipyard has been opened in Balangan, Bolinao, Pangasinan. Another one—Barrio Lasip, of the same municipality, was recently established. It is said that a shipyard will also be established in the vicinity of Agno, of the same Province, in the near future.

A new station was opened in Baler, in order that more frequent inspection trips through the adjacent territory could be made. The boundary lines in the proposed Mount Banahaw forest zone were reestablished and patrol trails were repaired around Mount Maquiling and Mount Malaraya.

The bureau of forestry has placed the large teak plantation in Jolo under management, but at present the operations are limited to preventing fires and the utilization of defective and matured trees only.

The ranger at Limay reports that the Cadwallader-Gibson Mill is now equipped with two large veneer machines. This company has also installed another sawmill on northwestern side of their concession.

A great deal of time has been devoted to the examination of forest lands claimed by individuals, who are taking advantage of the opportunity offered by the cadastral survey to include whatever parcels of land pleased them. It is, therefore, necessary for a forest officer to accompany surveyors and take notes of all claims to public forest.

THE OFFICE OF THE WOOD EXPERT.

This office inaugurated during the year a closer cooperation with the bureau of internal revenue in the identification of timber, firewood, and minor products in the Manila market.

Over 600 wood specimens, including many species new to the collection, were received from the field during the year, and over 1,000 local name cards from phenological reports and other sources were added to the index. Thirteen logs, fifteen 10-foot planks, about sixty 6-foot planks, and numerous specimens of minor products were installed in the museum. A large number of

tables, typewriter stands, filing cases, and similar furniture, both for the central office and for forest stations, was made in the shop. About 25,000 railway ties and over 500,000 feet of export lumber were inspected by members of this office.

DIVISION OF INVESTIGATION.

The chief activities of the division during 1918 were directed toward the preparation of a series of bulletins on minor forest products and a flora of the woody plants of Mount Maquiling region. The preparation of these series of bulletins seemed highly desirable for the reason that while the minor forest products are less important than timber they are very varied and of great economic value, and particularly at this time it is especially desirable to have in available form information concerning our resources.

Bulletin 15 gives a general account of Philippine bamboos, keys and description of species and notes on their uses, with an account of the growth of bamboos in plantations, rates of growth of mature bamboos, and data on the cost of planting, etc.

Bulletin 16 gives an account of the Philippine forest products that can be used for paper pulp, the supply and cost of harvesting.

Bulletin 17 gives an account of Philippine mangrove swamps, with keys to the species, description and pictures of the species, their economic uses, stands, growth, value for firewood and tannin, also the uses and methods of cultivation of the nipa palm. The swamps occupy between 400,000 to 500,000 hectares and are valuable assets to the people and the Government, and this bulletin should be of great value.

The manuscript for a bulletin on palms, fibers, oils, resins, and gums, and miscellaneous minor forest products has been practically completed, while the flora of Mount Maquiling is in progress.

These bulletins will also serve as texts for the forest school.

Studies are being carried on on growth, seedlings, reproduction, cuttings, durability, oil-bearing nuts, etc., and silvical leaflets prepared.

The work in Baguio has been kept up as formerly, ornamentals distributed free of charge, the city roads and parks planted up, and improved fire patrols kept up and general guarding of the city reservation performed.

The forest school was handicapped by lack of directing personnel, and the field trips were taken in conjunction with the reconnaissance parties of the bureau. It is hoped to inaugurate the higher course this year.

The reforestation work on the friar lands in Cebu has been a marked success, and the cooperation with the municipalities of the Ilocos Provinces gives every indication of popular support, but lack of funds prevented the carrying out of the project. In Baguio, in cooperation with the Consolidated Mining Co., the watershed of Antamok Creek is being planted up.

DIVISION OF SAWMILLS AND UTILIZATION.

The majority of the rangers of this division were called upon to perform general administrative work under the other divisions of the bureau in addition to their scaling and concession work, so that time for special studies and grading instruction has been greatly curtailed.

In order to relieve the rangers for general administrative and investigation work, for which they were trained at the forest school, the appointment of guard scalers is being adopted. These men are generally of grammar and intermediate school training, who have had experience in sawmill and logging work. After being given a thorough training in log defects and determination of utilization and waste in the mills, they are assigned to scaling work under the supervision of a ranger experienced in the work.

In spite of the demands on the bureau personnel during the year, five more rangers were given preliminary instruction in grading lumber at the various mills in southern Mindanao, making a total of 10 rangers who have had preliminary training in grading work.

Data on logging and milling methods and costs is being gathered from the different mills in the islands with special reference to the larger and best-managed operations in order to secure figures showing the general cost of lumber production in the islands.

Complete records, as far as the figures can be obtained from the companies, are also kept by amounts and species of the lumber produced and amounts shipped to the various local and foreign markets, and in turn the importa-

tion of foreign lumber and possibilities of replacement with local species is being studied for the purpose of creating, as far as possible, a clear field for native lumber as against American and other woods which have entered the islands in competition, more or less continuously, since the establishment of the lumber industry here.

While the signing of the armistice in Europe in November created some disturbance and uncertainty among the lumber dealers, conditions have remained good with excellent prospect for the coming year.

In spite of a large decrease in exports, owing to the demand on shipping for other products and the heavy freight rates, the larger mills have continued to operate full time and in some cases overtime, with a resulting production of some 62,000,000 board feet for the seven larger concession areas as compared to 56,000,000 board feet in 1917.

The total production for all the mills in the islands was approximately 75,000,000 board feet, as compared to 60,000,000 board feet in 1917.

With this total production of 75,000,000 board feet from the sawmills of the islands, the local markets have continued to be the chief purchasers, taking a larger percentage than during the previous year, or about 68,000,000 board feet—91 per cent, as against 80 per cent.

In addition to the native lumber, there have been imports amounting to 14,879 cubic meters, or 6,308,700 board feet, from the United States and other countries, of which 7,387 cubic meters, or 3,135,000 board feet, was Oregon pine and redwood, as compared with 2,768 cubic meters, or 1,174,000 board feet, in 1917.

Although a certain amount of this increase in pine imports may be attributed to failure of local purchasers to appreciate the comparative qualities of pine and local lumber, a large portion of the lumber has not been sold in the Philippines but has been reexported to India and the Dutch Indies.

While Manila is the chief market in the islands, owing to its importance as a distributing center, the ports of Iloilo and Cebu, in the Visayas and Zamboanga in Mindanao received large shipments during the year in addition to the local demand supplied directly from the sawmills and smaller licensees. The steady settlement and development of Davao Province has led to the establishment of two yards in the town of Davao, which is rapidly developing into an important center.

In spite of the uncertainty created by conditions in Europe, prices continued high throughout the year, with increases over 1917 of 20 to 30 per cent, and in some cases as high as 40 and 50 per cent.

In foreign sales lumbermen have reported numerous inquiries and orders, many of which they have been unable to meet owing to the continued shortage of shipping space during the greater part of the year.

Shipments during 1918 decreased some 12,000 cubic meters as compared with 1917, but this is largely accounted for by the assignment of practically all shipping space to other local products—hemp, copra, oil, etc.—and the very high freight rates met with.

The China market, which is capable of being developed into one of the largest purchasers of Philippine lumber, can be supplied more readily with the release of shipping, and a reduction in freight rates which will permit the placing of lumber on that market at fair prices.

An indication of the possibilities for developing markets in China is found in the United States Commerce Reports for November and December, 1918, on the Chinese lumber markets and possibilities of developing the Douglas fir (Oregon pine) market in South China.

In northern China the above-mentioned reports show that softwoods from America, Japan, and China, together with oak from Japan, at present occupy the chief place in the lumber market. Philippine woods are chiefly imported into Tientsin and vicinity for flooring and interior finish.

However, the importation of 733,172 cubic feet of hardwoods into Tientsin and 188,309 cubic feet in Hankow during 1917, when transportation was difficult and expensive, together with the variety of uses for which Philippine lumber is suited, indicates the excellent prospects available for an active campaign in this region.

Inquiries from Japan, Australia, and South Africa during the past year, while not giving especial promise of much business at present, should lead to further introduction of Philippine lumber in those countries and the establishment of a permanent trade.

DIVISION OF FOREST LANDS AND MAPS.

In order to carry out properly the work of this division, cooperation with other Government branches is essential. Cooperation with the bureau of lands with regard to indicating in detail the different vegetation of lands surveyed is important. Without sufficient information indicated on the plans, this bureau can not very well attend to the necessary opposition by the Government without considerable loss of time and money, occasioned by unnecessary inspection.

The provincial fiscals should be thoroughly advised of the procedure of presenting opposition to land covered with forests by the attorney general. In all cases, technical reports of forest officers should be introduced in the court as evidence with the verbal testimony of the forest officer. During the year this section handled 1,235 land cases, of which actions were taken on 184.

Eighty-four parcels of forest lands, with a total area of 43,213 hectares, 17 ares, and 26 centares, have been registered in accordance with the provision of section 1829 of the Administrative Code. Several applications for registration of land containing heavy stand of timber and other forest products have been received, but, due to the fact that the titles presented supporting those claims were merely land-tax declarations and receipts, those were rejected. The method of claiming land and declaring same for taxation, coupled by the seeming ambiguity of the interpretation of the provision of section 1513 of the Administrative Code, give rise to serious destruction of otherwise valuable Government property. Annually thousands of hectares of land are cleared and thousands of pesos worth of valuable timber are burned which could have been prevented by stricter laws. The admittance of declarations on forest land by the provincial assessors for the purpose of taxation is greatly responsible for the destruction of forests under the shade of ownership once taxes are paid.

During the year there were acted upon the following public-land applications for acquisition of public lands under the provision of public-land acts:

Applications received during 1918.....	11, 722
Certified for agriculture.....	6, 134
Certified for forestry.....	670
Returned uncertified to bureau of lands.....	242
	<hr/> 7, 046
Total pending Dec. 31, 1918.....	4, 676

More than 40 per cent of these 4,676 pending applications have been examined during the month of December and only pending the recommendation of district officers.

Forest reserves are urgently needed in order to carry out the successful work of this bureau. Unless reservations are established in those places where more forestry work is carried out the continuous frictions and serious conflicts arising between licensees and occupants of lands are sure to arise. The work of the bureau and its licensees are invariably hampered, and the exploitation is hindered through lack of full control over the area under management of this bureau.

Seven forest reserves were proposed during the year. One was approved, two were disapproved, and four are still pending for the technical descriptions.

Two forest zones have been definitely located and radical changes have been made from their former boundaries, with the end in view of establishing them as forest reserves. These are the Mount Banahaw and Mount San Cristobal zones in the Provinces of Laguna and Tayabas, and Mount Arayat in the Province of Pampanga.

Sixty-three parcels, with a total area of 6,965 hectares, have been officially established communal forest throughout the Philippines. During the year one parcel was canceled.

There has been prepared a forest map of Luzon, Mindoro, and adjacent islands in the scale of 1:4,000, containing the latest available data. There were also added considerable graphical information to the forest progressive map in the scales of 1:100,000 and 1:20,000. Six thousand seven hundred and sixty-two and eight-tenths kilometers of topographical and forest notes were taken by the field force with 760 hectares, 99 acres of forest valuation. In the drafting section there were also made 1,280 copies of blue prints for public information and for official purposes. Besides numerous small plans for administrative

purposes there also have been made original plans from the different communal forests, model houses for forest stations, auxiliary schooner, and other drafting work connected with general administration.

There were six forest reconnaissance projects completed and reports were available at the end of the year. These reconnaissances cover an area approximately 217,140 hectares, distributed as follows:

1. Mineral region of Paracale and Mambulao, Ambos Camarines, October, 1917, and early part of 1918, comprising an area of 17,990 hectares.
2. Central region of Tayabas, October, 1917, to February, 1918, covering an area of 45,180 hectares.
3. Region between Laulis (north) and Salasa (south) Rivers, in Masinloc, Zambales; area, 17,800 hectares.
4. Northern region of Ragay Gulf, Ambos Camarines, December, 1917, to January, 1918; area covered, 70,800 hectares.
5. Coal region of Sibuguey, Zamboanga, December, 1917, to January, 1918; area covered, 46,600 hectares.
6. Cabibihan River, Guinayangan, Tayabas, March, 1918; area, 18,570 hectares.

ADMINISTRATIVE DIVISION.

This division, including accounts, property, finances, and general service, carried on the work efficiently under the handicaps presented during last year, due to resignation of men having received higher grades in the civil-service examination and for the retention of whom no money was available in the appropriation of the bureau. This division is entirely Filipinoized. The work of this division has increased materially during the past year, in view of the increase in the number of licenses and the inauguration of certain special projects.

RECOMMENDATIONS.

The undersigned wishes to again repeat the recommendations made in last year's report.

1. The illegal occupation of public land to be punished by law.
 2. The penalties for the destruction of forests to be increased.
 3. The penalties for evading the payment of forest charges should be materially increased for the second offense.
 4. The illegal cutting of forest products should be classed as theft and treated as such.
 5. Section 1520 of the Administrative Code should be changed to require the payment of forest charges on all forest products cut or gathered, whether removed from the forest or not, before a license expires.
 6. Efficient means for the eradication of water hyacinth should be instituted.
- Forest guards should be forbidden to have any pecuniary interest in forest products.

The bureau of forestry should be given positions for qualified surveyors to do the urgent survey work on forest reserves. Cooperation with the bureau of lands, as recommended under the division of forest lands and maps, should be instituted. An attorney of the bureau of justice should be assigned wholly to the legal work of this bureau.

It is recommended that the present system of the disposal of public lands be changed, inasmuch as at present lands are selected by individuals, settled and cultivated to some extent, before surveys have been made, and it is next to impossible to guard the interest of the Government along conservation lines as long as this system is followed. Conflicts are constantly being engendered between neighboring settlers as well as with the Government. No provision is made for possible right of way by the Government for roads, etc., in new areas, and it is a well-known fact, brought out by several investigations throughout the world, that the individual in general is not competent to select land for his own best interest or that of the Government. It is recommended that the Government institute as soon as possible a system of surveying land before settlement, which is now being done on some of the agricultural colonies.

Provision should be made for a permanent forest guard force. An increase in the clerical personnel, not only in number but also in salaries, is essential. Provision should be made for systematic reforestation and reconnaissance on a large scale.

For the forest school and the division of investigation additional buildings are necessary as well as additional equipment to adequately give the higher course and carry on investigative work. Additional cottages are necessary for the housing of the students and personnel of the school and the division of investigation.

Personnel.—As stated last year, the demand for forest officers of the bureau of forestry in the Orient has again been felt, and it is strongly recommended that the salaries be placed on the same basis as all other scientific branches of the Government; that the amount of per diems now received by the rangers be increased, necessitating a change in the Administrative Code; that field clothing, especially shoes, blankets, mosquito nets, and khaki, be bought by the bureau and sold to the men in the field at cost.

It is further recommended that game and fish legislation be made stricter and intrusted to forest officers for administration.

INCOME.

The income of the bureau, as will be noticed from the table in the appendix during the past year, amounts, from the latest figures available, to ₱650,691.61, while the appropriation of the bureau last year, including the deficiency, amounted to ₱352,100, of which ₱332,334.72 were spent, giving a percentage of expenditures to revenues of 51.

BUREAU OF LANDS.

GENERAL.

The functions of the bureau of lands were faithfully preserved and followed during the year ending December 31, 1918. Changes in the organization were few and slight, and all resulted from the growth of well-defined policies of the bureau rather than from radical reforms. The work was steadily increasing parallel with the widening activities of the bureau, but the procedure in which it was performed did not suffer any substantial change.

PERSONNEL.

The bureau began the year 1918 with a total personnel of 478, and ended same with 521, which are 83 and 90 per cent, respectively, of the total number of 576 authorized by the appropriation act for the year 1918 (Act No. 2727). In spite of this handicap, the general work of the bureau was pushed forward as far as it was possible so to do under the circumstances, and the results show clearly that every effort and endeavor was made and exerted.

CHANGES.

Many changes in the personnel occurred during the year, the principal one being that of Mr. Walter E. Jones, assistant director of lands, who was succeeded by Mr. Conrado Carballo.

Changes in the positions of chiefs of divisions occurred in the following divisions, including, of course, those positions held by acting incumbents: Accounting and property division, twice; law division, once; survey and drafting division, thrice; computing section, twice; cadastral section, once; drafting section, once; general map section, twice; and Manila cadastral survey, thrice.

Taking into consideration all these changes, coupled with the shortage of personnel, it is remarkable that, in spite of these unfavorable conditions, the established plan of work of the bureau was not only carried out without any serious interruption and continued smoothly, but also there was in some respects considerable advancement or progress over the work accomplished during the preceding year.

PUBLIC LANDS DIVISION.

During the year 1918 there were several reforms introduced into the routine work hitherto performed in this division, either to fill up some gaps or deficiencies which were being noted from time to time or to further or coordinate its policy with the course taken by legislative actions and judicial rulings.

As in previous years, provincial treasurers and chiefs of survey parties have been used as lands inspectors, and although their participation in the work has, indeed, constituted a valuable and substantial aid to the proper handling and prompt adjustment of conflicts, the inadequacy of the number of personnel, both in the clerical force and in lands inspectors to cope with the great accumulation of work, has nevertheless remained a vexatious problem.

The number of patents issued during the year is relatively less than the number of those issued during the year 1917. This is due on the one hand to the fact that the land must be surveyed as a condition precedent for the issuance of patent, and the surveying division of this bureau lacks sufficient personnel to cope with its accumulating work, and on the other to the fact that many of the parcels of land for which patents are ready for issuance are situated in municipalities or places where cadastral surveys have been started or are about to be started. This being the case, the relative tardiness incident to cadastral surveys is considered preferable to the apparent promptness of isolated ones for the reason that as soon as these general surveys are terminated the decrease now noted will be more than counterbalanced in the long run.

HOMESTEADS.

Eight thousand two hundred and fifty-nine applications were filed during the year 1918, with a decrease of 663 applications from that of the year 1917.

The decrease in the total number of homestead applications, as noted above, is not at all strange if we take into consideration the very abnormal conditions prevailing during the year, which were as unfavorable for the homestead institution as they were encouraging and attractive for other lines of activities. Part of this decrease may be attributed to the inclinations of the people to live in, or to their fond attachment to, the centers of population or in the vicinity thereof, together with the lack of ways and means of communications with isolated or inland places.

And to these very circumstances are due the numerous protests against new applications received on the ground of adverse claims or conflicts with previous applications. Said protests are such in number that they amounted to 3,813 during the year 1918, equivalent to more than three times the 1,222 protests filed during the year 1917.

Out of the total number of protests filed, 269 were sustained, 1,422 were dismissed, and 1,822 are pending report of public lands inspectors.

It is to be regretted that the bureau has neither sufficient facilities to carry on a campaign for the dissemination of information in regard to homesteads and for the settlement of protests, nor adequate force to take charge of the proper enforcement of the law and of the regulations and rulings of the bureau so as to prevent in this way the poor applicants from committing the sad mistake of involving themselves in suits instead of accomplishing their aims of acquiring lands for themselves and their families.

The advance survey of the public lands and the fixing of their boundaries with private properties is undoubtedly the most speedy and effective measure of preventing or avoiding the evils usually incident to homestead contests, but in the meanwhile that this can not be carried out simultaneously throughout the whole archipelago, the more frequent if not permanent presence of lands inspectors in those places where there are many lands applied for, or subject to entry, as homesteads, should be adopted as a subsidiary measure.

The total number of applications approved during the year is 4,278. There is a decrease of 720 from that of the previous year.

SALES.

There were received during the year 716 applications, with an increase of 33 over that of the previous year. The number of actual sales made is 182, with an increase of 45 over that of the preceding year, covering an area of 4,959.6785 hectares. The sales value of the lands is ₱69,573.26, and the amount actually paid is ₱23,768.36. An increase of ₱5,133.03 over the total sales value of the lands sold during 1917 is reported, as well as an increase of ₱3,698.47 over the amount actually paid. There is, however, a decrease of 369.9212 hectares from the total sales made during the previous year. This is due to the fact that the adjudications during 1918 were made mostly to individuals.

LEASES.

There were received during the year 317 lease applications, with an increase of 151 applications over that of the previous year. The leases executed are 24, there being a decrease of 18 from that of the previous year. This is due to the fact, as stated above, that the bureau has been furthering and coordinating its policy in accordance with legislative actions and judicial rulings, the result being a greater delay, but which is convenient and advantageous to the handling of lease applications, especially those filed by corporations.

Ninety-seven protests against lease applications and entries were received during the year. Sixteen of these were sustained and 45 dismissed. There are 36 protests still pending. Decisions on these protests will be rendered as soon as the reports of our inspectors are received.

FREE PATENT.

There were received during the year 1,203 applications, with a decrease of 616 applications from that of the previous year.

The number of patents issued during the year is 259, covering an area of 901.2686 hectares, with a decrease of 1,974 from that of the previous year. The same reason mentioned in the report relative to homestead patents is applicable to free patents. There are at present about 6,000 free patent applications ready for survey. The greater part of these are of lands in the island of Siquijor, and for this reason it is deemed preferable to start cadastral surveys over the entire island in the near future.

FORESHORE AND LANDS UNDER WATER.

During the year there were received 12 applications to lease foreshore and lands under water, as follows: One from Albay, 1 from Davao, 1 from Misamis, 1 from Oriental Negros, 1 from Samar, 2 from Sorsogon, 2 from Surigao, and 3 from Zamboanga.

Five foreshore leases were executed during the year, covering an annual rental of ₱226.

FORESHORE REVOCABLE PERMITS.

The number of applications received during the year is 18, distributed as follows: Four from Misamis, 2 from Rizal, 4 from Capiz, 1 from Cebu, 2 from Leyte, 1 from Agusan, 1 from Oriental Negros, 1 from Zamboanga, 1 from Batangas, and 1 from Samar.

RECLAIMED LAND LEASES.

A certain increase is being noted in the number of reclaimed land lease applications, there being during the year 12, distributed as follows: Albay, 1; Davao, 1; Iloilo, 2; Manila, 7; and Surigao, 1.

On December 11, 1918, the survey of Surigao reclamation, Surigao, Surigao; Macabalan reclamation, Zamboanga, Zamboanga, was begun. It is expected to complete these surveys in the earlier part of 1919.

INSULAR GOVERNMENT PROPERTY.

According to the certified copies furnished this bureau by the office of the Governor General, there were received during the year three applications to lease private property of the insular government, these having been executed and carrying an annual rental of ₱3,035. The total number of executed leases up to date is nine, carrying an annual rental of ₱7,733.

There were received during the year 4,820 certificates of forfeiture. During the year 414 applications to repurchase lands forfeited to the Government have been approved and repurchase effected in the offices of provincial treasurers. One thousand four hundred and eighty-seven certificates of forfeiture have been canceled through requests of provincial treasurers.

TEMPORARY USE OF PRIVATE PROPERTY OF THE INSULAR GOVERNMENT AND FORFEITED LANDS IN CONNECTION WITH THE FOOD PRODUCTION CAMPAIGN FOR THE PURPOSES OF CULTIVATION.

To cooperate with the committee on food production campaign, the bureau of lands, with the approval of the department, has inaugurated the policy of loaning private property of the insular government for purposes of cultivation to farmers at a nominal rental of 1 peso per hectare or fraction thereof.

Pursuant to this policy, several farmers filed applications for temporary use covering one of the lands formerly belonging to private individuals, but which are now private property of the insular government.

RESERVATIONS OTHER THAN TOWNSITES.

During 1918, 13 civil reservations were established by proclamation and executive orders of the Governor General, covering a total of 23,997.2145 hectares.

COAL LEASE APPLICATIONS UNDER ACT 2719.

There were filed during the year 10 coal lease applications. Two leases were executed—one, in favor of W. Huse Chapman, located in Toledo, Cebu, covering an area of 1,120 hectares, and carrying an annual rental of ₱2,800 for the first year and ₱5,600 for the succeeding years; and the other one executed in favor of Leon Rosenthal, located in Batan, Rapu-rapu, Albay, covering an area of 400 hectares, and carrying an annual rental of ₱1,000 for the first year and ₱2,000 for the succeeding years. The latter lease was recently assigned to the Philippine Mining Co.

COAL PERMITS.

There have been received during 1918, 40 applications. Thirteen out of the total number received up to date have been approved, covering a total area of 47.3500 hectares. Five applications were canceled and 26 pending. The greatest number of these applications came from Cebu (39).

PRIVATELY OWNED COAL CLAIMS.

There were received during the year 22 applications for registration in the bureau of lands in accordance with the regulations promulgated by the department of agriculture and natural resources on August 15, 1917, and the applicants were given opportunity to submit valid titles showing ownership in themselves, such as "titulo real" duly registered in the office of the registrar of deeds where the land is located.

PLACER LOCATIONS.

No patents were issued to placer locations during the year.

LODE CLAIMS.

During the year seven patents to lode claims were issued, covering a total area of 61.1183 hectares, located in the Mountain Province.

FRIAR LANDS DIVISION.

GENERAL CONDITIONS.

Until the beginning of the third quarter conditions in the estates with the exception of Talisay-Minglanilla and Banilad estates, Cebu Province, were very encouraging; prospects of abundant crops were in evidence throughout the estates. Unluckily, this promising outlook was marred, due to the persisting drought, which has considerably diminished the flow of water in our irrigation systems, and to the sudden appearance of the "influenza" disease, which prostrated in bed and otherwise incapacitated for work for a long while most of the tenants, as well as their workers, and as a result the fields had to be neglected in the most critical time.

LOTS OCCUPIED BY CHURCHES, CONVENTS, ATRIOS, YARDS, AND CEMETERIES.

An agreement was arrived at between His Grace the Archbishop of Manila and the director of lands, whereby the church was to pay for all the lands ordered excluded, conditioned that titles therefor be issued in favor of the Roman Catholic Church. This agreement was strictly carried out, and the long-protracted negotiations regarding the matter may be now considered as definitely settled.

CIVIL RESERVATIONS.

Under Executive Order No. 20, series 1918, there were reserved for the Province of Cebu for public purposes 300 vacant lots in the Banilad estate, containing an aggregate area of 634.0205 hectares, upon condition that the Province pay to the friar lands sinking fund the full value thereof together with interest. As the Province did not have sufficient funds to pay the whole amount at once, or ₱32,316, they proposed to make the payment in three installments, which proposition was readily accepted. The first installment, or ₱10,000, has already been paid.

FOOD CAMPAIGN.

To cooperate, in a way, with the increased-production campaign, which has been waived for some time, we issued 138 permits, authorizing persons to provisionally occupy and cultivate an equal number of vacant lots under certain conditions. The area covered by these permits is 104.4952 hectares. The regulations authorizing the issuance of these permits were given wide publicity throughout the estates. However, only in the Talisay-Minglanilla estate did these provisions meet with unanimous approval, because out of the 138 permits issued 120 pertain to that particular estate.

AMENDMENT, FRIAR LANDS LOAN FUND REGULATIONS.

To make the friar lands loans as easy and attractive as possible sections 4, 5, and 7 of the Friar Lands Loan Fund Regulations were amended, requiring annual payment of interest, extending the maximum amount loanable on "preference rights" to 60 per cent. These amendments have so far given very satisfactory results.

IRRIGATION SYSTEM.

Under Act 2727 there were appropriated ₱55,000 for the maintenance and repairs to the friar lands irrigation systems and ₱33,900 more under the Public Works Act No. 2636. The money appropriated under the first act has been mostly allotted and expended, the work having been done by administration; that is to say, by the bureau's force. Regarding the other ₱33,900, this money was duly released by the undersigned and the bureau of public works was intrusted to undertake the reconstructions and repairs to certain projects. Repeated inquiries at the bureau of public works showed that it was necessary to postpone the undertaking of said projects on account of lack of available personnel. As this later item is expendable on or before June 30 next, every possible effort will be made to have said projects attended, to avoid the reversion of the appropriation to the general fund, and, principally, to save the projects from total destruction.

COLLECTIONS.

The collections this year, in spite of the fact that we have sold lands worth ₱1,040,582.93 during the year, as against ₱666,855 last year, have been exactly 4 per cent less than last year. This is due mainly to the reasons stated in the paragraph under the heading "General conditions"; otherwise, we could have easily surpassed last year's collections by ₱100,000 at least.

SAN LAZARO ESTATE.

GENERAL CONDITIONS.

Much business has been done this year in the estate. Immediately upon the passage of Act No. 2765, amending Act No. 2360, all high-priced and unproductive vacant land was immediately disposed of, with the result that there remain

but three small lots vacant. Two of these lots could have been readily disposed of were it not for the fact that the Bilibid prison authorities are against the disposal thereof in favor of private persons because same are right against the walls of the prison.

COLLECTIONS.

Due to the numerous sales made this year, the collections, amounting to ₱450,494.64, have exceeded those of last year by the good margin of 22.6 per cent. This is the best collection ever had.

"CENSOS."

One of the "censos" was redeemed this year and title therefor was promptly issued. The "censos" for four parcels of land, the legal ownership of which is vested in the San Lazaro Hospital and the beneficial ownership in other persons, and another parcel in Santa Ana, the legal ownership of which is vested in the Jesuit Order and the beneficial ownership in the San Lazaro Hospital, have not yet been redeemed.

LAW DIVISION.

UNPERFECTED TITLES (CHAP VI, SEC. 59, ACT 926).

There were 778 notices received from the courts of first instance of several Provinces of cases in which the applicants invoked the benefits of Chapter VI of the public-land act. The area covered by these applications aggregated 631,883 hectares, 2 ares, and 85 centares.

CASES UNDER ACT 496.

The following comparative statement shows the action taken by the bureau upon receipt of the notifications of hearing thereof:

	1918	1917
No opposition.....	350	209
Opposition.....	75	52
Total.....	425	261

A rapid glance over the foregoing statements would readily show that there were more registration cases brought under Chapter VI of Act 926 than under Act 496. Comparatively speaking, there is but a limited area of lands in the Philippine Islands covered by perfected Spanish titles, and the majority of those desiring to avail of the benefits of the Torrens system invoke the provisions of Chapter VI of the public-land act, in most cases relying exclusively upon possession and occupation.

COMPULSORY REGISTRATION (CHAP. VI, SEC. 61, ACT 926).

There were two cases filed under this section in the courts during the year—one in Leyte and one in Jolo. These two cases are still pending in the courts of first instance of the respective Provinces.

CADASTRAL CASES (ACT 2259).

Twenty-seven petitions were prepared in this office under this act, distributed as follows: One in Bataan, 10 in Manila, 3 in Occidental Negros, 7 in Oriental Negros, and 6 in Pampanga. During the year 1917 there were only 18 cadastral cases filed in court. This shows that there has been a steadily increasing number of cadastral cases filed every year.

TOWN SITES (CHAP. V, ACT 926).

Up to the present time there have been 18 town sites established under Act 926. There were many other proposed town sites surveyed, but not formally reserved. There were no surveys made of proposed town sites during the year.

All the town site reservations have been subdivided, with the exception of the town sites of Laoag, Ilimay, San Jose, and Tarlac. The plats of the subdivision of the town sites of Cabcaban and Davao were already submitted to the legislature for approval.

OPERATION UNDER ACT 2777.

Act 2777, providing that certain claims or rights of ownership to parcels of land included in town-site reservations may be filed in the proper court within the period of one year under certain conditions, was passed by the Philippine Legislature and approved May 6, 1918. It took effect October 5, 1918, the date on which it was proclaimed by the Governor General.

Under this act it is the duty of the director of lands to determine the parcels of land coming under the operation of the act and to so certify to the proper court within one year from and after the date on which it takes effect. He shall also fix and determine, through a committee to be appointed by him in each Province where town sites lie, the total expenses incurred in each of the reservations as regards their survey, publication of notices, and other expenses inherent to the creation of said reservations, which expenses, after having been apportioned among the lots, would be paid by the claimants aside from the ordinary registration fees. The work of determining the parcels of land declared public lands within the town sites is almost complete, and certifications would be made to the court as soon as the total expenses have been fixed and apportioned among the lots as required by law.

SUITS FOR POSSESSION.

There were several complaints and answers prepared by this bureau and filed in different justice of the peace courts in an endeavor to protect land grantees in the possession of their holdings, but, due to the inability of the office to attend the hearing of these cases with its own personnel familiar with the fact and circumstances of each case, as a general rule no satisfactory results have been obtained. The only way to avoid such unsatisfactory results is to permit the bureau to have at its disposal a corps of law clerks or public-lands inspectors who can be sent to take personal supervision of such cases.

SURVEYING AND DRAFTING DIVISION.

Notwithstanding the fact that the work of this division has been greatly handicapped due to radical changes in the personnel through the separations, resignations, and transfer of a considerable number of employees, nevertheless every effort has been made to offset these results and to maintain the efficiency of the field work that is being carried out by the bureau.

CADASTRAL SURVEYS.

The cadastral survey of the Philippines inaugurated a few years ago has been carried throughout the year in spite of unfavorable conditions. At the end of the year—that is, on December 31, 1918—36 cadastral projects were in progress in the field. Twelve of these were inaugurated during the year 1918 and 16 were completed.

There are several municipalities which have been authorized in previous years and which have not as yet been surveyed.

Due to the shortage in personnel the division can not, however, meet the ever-increasing demands for cadastral surveys.

COST OF CADASTRAL SURVEYS.

Up to December 31, 1918, the cadastral account was as follows:

Total expenses of the bureau of lands and the courts.....	₱3, 421, 779. 74
Less insular government share, as required by law.....	343, 693. 94
Total to be paid by the provincial and municipal governments and the property owners.....	3, 078, 085. 80
Payments made by Provinces, municipalities, and property owners	100, 110. 34
Unpaid balance, Dec. 31, 1918.....	2, 977, 975. 46

CADASTRAL COLLECTIONS.

During the year the collections of the cost of cadastral surveys which have already been decreed have been the following:

Repayments	P25,366.62
Interests and penalties	7,269.06
Total	32,635.68

REGISTRATION OF CADASTRAL SURVEYS.

During the year 24 cadastral cases have been decreed by the courts, consisting of 23,228 lots, comprising an area of 49,434.5 hectares. A summary statement of the cadastral cases in the course of registration proceedings is as follows:

	Cases.	Lots.	Hectares.
Cadastral surveys:			
Filed in courts	25	15,189	48,062.71
Amended in accordance with decisions of courts	18	11,386	41,566.41
Decreed during 1918	24	26,228	49,434.5

PUBLIC-LAND SURVEYS.

The survey of public lands executed under the various provisions of the public-land act has been continued, and during the year the following has been the work performed:

	Surveys.	Parcels.	Area, in hectares.	Cost.
Free patents	224	224	808.4526	P9,804.15
Homesteads	218	218	2571.8155	8,733.43
Purchase, individuals	9	9	118.8068	564.50
Total	451	451	3,499.0739	19,102.08

The following statement gives that of the surveys of public lands the cost of which is reimbursable:

	Surveys.	Parcels.	Area, in hectares.	Cost.
Town-site subdivision	1	2	3.9596	P12.79
Investigation of public domain, sec. 61, Act 926	2	80	1,122.1641	5,115.91
Lease	22	22	7,776.7057	7,681.68
Purchase, corporation	1	1	884.9980	442.99
Insular reservation	1	1	10.5626	123.76
Provincial reservation	2	23	2,559.4981	2,977.91
Lease, cadastral	1	1	113.1205	31.13
Total	30	130	12,476.0266	16,387.56

COMPARATIVE COSTS.

A study of the statistics on the costs of executing nonreimbursable surveys, such as free patents, homestead, and purchases by individuals, will clearly give an idea of the advantages to be derived in executing these surveys whenever possible in conjunction with the cadastral surveys:

	Cost per parcel.		Cost per hectare.		Average area per parcel, in hectares.	
	1917	1918	1917	1918	1917	1918
Free patents.....	97.47	42.00	22.78	11.64	4.28	3.61
Homesteads.....	64.37	40.06	5.60	3.40	11.50	11.80
Purchase, individuals.....	95.74	62.72	8.10	4.75	11.78	13.20
Investigation of public domain.....	24.71	63.95	.50	4.56	49.07	14.03
Town-site subdivision.....	16.98	6.89	113.00	3.48	.14	1.98
Leases, corporation.....	808.45	443.98	1.63	.50	429.78	885.00
Insular reservation.....	3,240.39	123.76	.19	11.69	17,223.78	10.58
Provincial reservation.....	140.11	129.47	1.16	17.51	7.92	111.28

MISCELLANEOUS SURVEYS.

There have been several surveys of mining claims, as follows:

	Surveys.	Parcels.	Area in hectares.	Cost.
Coal claims.....	5	5	1,914.7590	₱1,719.16
Lode claims.....	24	24	174.0320	4,329.07
Total.....	29	29	2,088.7910	6,048.23

Under the provisions of Act 2719 many applications for coal lease are being filed, and in the very near future it will be necessary to extend the activities of this bureau concerning mineral surveys.

FORESHORE LEASES.

During the year only four surveys, consisting of five parcels, with a total area of 1.5494 hectares, were executed at a cost of ₱297.88.

UNPERFECTED TITLE SURVEYS (SEC. 58, ACT 926.)

During 1918 only 341 surveys, consisting of 713 parcels, with a total area of 14,697.1148 hectares, were surveyed at a cost of ₱35,420.75.

UNPERFECTED TITLE SURVEYS BY PRIVATE SURVEYORS.

During 1918 there were presented 2,998 surveys, which consist of 6,906 parcels, with a total of 53,895.8987 hectares. The total cost of verifying this work of private surveyors during 1918 has amounted to ₱24,088.91. This represents a considerable increase over the cost incurred in 1917, which was ₱16,870.95.

LOCATION-MONUMENT SURVEYS.

The road surveys executed during the year for the purpose of determining the position of location monuments comprise a length of 97 kilometers, distributed as follows by Provinces:

Province:	Kilometers.
Bataan.....	11.8
Cebu.....	11.7
Ilocos Sur.....	2.1
Palawan.....	6.8
Rizal.....	9.3
Sorsogon.....	31.5
Tarlac.....	22.8
Union.....	2.5
Total.....	97.0

It is very important that these road surveys be continued in order to determine the location monuments of many municipalities where such monuments do not exist as yet and where many surveys are executed by qualified private surveyors.

PRIVATE SURVEYORS.

The total number of surveyors duly authorized to execute surveys in accordance with the requirements of Act 1875 and its amendments is 253.

FINANCIAL STATEMENTS.

There is a proportional increase in the receipts and expenditures of the bureau during the year 1918 over the preceding year, consisting of the sums of ₱118,583.06 and ₱123,993.89, respectively.

RECOMMENDATIONS.

In those Provinces, or even municipalities, where numerous parcels or extensive public lands covered by applications or subject to entry are located a local land office should be opened under the charge of either a public lands inspector or a competent surveyor. This local land officer would help the applicants, inspect the premises, investigate claims, settle disputes over public lands, and run the preliminary lines by compass, which in the hands of a fairly practical man would be very accurate; in fact, sufficient for all the necessities of this office until the final survey is made. In this way a greater number of applications could be approved without unnecessary delay, and a smaller number of contests would arise.

Independently of cadastral surveys, which are principally intended for the registration of titles to private properties, the compulsory registration provided for in section 61 of Act No. 926 should be given greater impulse to definitely settle these claims, more or less founded, to large and valuable tracts of lands, which are being kept idle and closed to entry by homesteaders or settlers on account of such claims.

The public lands division must be reorganized so that it will be composed of three sections, to wit, the general and administrative section, homestead section, and mineral lands section, the last two being the ones to be created.

These measures imply the necessary increase in the number of personnel as well as in the appropriation for this bureau, but it is evident that the results which are expected to be obtained sufficiently justify the adoption thereof.

BUREAU OF SCIENCE.

In spite of the retirement of several of the scientific staff and the withdrawal of a large number of men to enter the United States National Army, the demands upon the bureau of science have not abated and, with the remaining personnel, the bureau of science has strained itself to be of the greatest service to the public. Owing to the prevalence of epidemic diseases, such as smallpox, cholera, and influenza, and to the inadequate supply of scientific employees in Philippine industrial operations, such as the production of sugar, cement, alcohol, etc., the bureau of science has been called to perform a very great number of analyses and examinations, to manufacture an unusually large amount of serums, to answer many technical inquiries, and to supply professional men temporarily or to give technical advice and supervision on the ground. Requests for information have been carefully replied to in writing on an exceedingly large number of all manner of subjects. In addition to the large number of written replies there have been a vastly greater number of replies in telephone conversations and personal interviews. In spite of this information to the public the bureau of science has been greatly undermanned at a time when there was need for greatly increased activity.

WAR WORK.

Wherever the bureau of science has been able to assist in war work other duties have been temporarily suspended in order that whatever assistance was desired might be given. The technical employees have rendered various services, especially in medical, chemical warfare, quartermaster, and in Siberian relief work. Large quantities of antityphoid serum, tetanus antitoxin,

smallpox vaccine, typhoid triple vaccine, and limited amounts of several other bacterial vaccines have been manufactured and supplied for the Bilid prisoners at Fort Mills, the Siberian refugees under the American Red Cross, or the Philippines Division of the United States National Army. A course in immunology and serology was given to the medical student officers of the latter by the chief of the serum section. The preparation of a large amount of culture media and stains was done for the Philippines Division of the United States National Army. Professional advice has been given, and various poisonous gases have been manufactured or furnished in quantity for the United States National Army officers' gas defense training school. Advice and assistance have been rendered to the Chemical Warfare Service in expediting and increasing the efficiency of the production of charcoal from coconut shells for shipment to the United States for use in the manufacture of gas masks, and with regard to the possible utilization of other Philippine products, such as pill and lumbang shells, for the production of gas-mask charcoal.

Tests have been performed for the ordnance and other branches of the Philippines Department of the United States Army with regard to war materials and new ordnance supplies of an explosive nature. Flares have been compounded for officers stationed at Fort William McKinley. Explanations of technical notes regarding new chemical compounds recently coming into use for gas offensive and defensive warfare, recommendations regarding types of timber best adapted to ship and aeroplane manufacture, and advice and data regarding increased production of castor oil or oil from other plants for lubricating motor machinery in aeroplanes have been given. By technical assistance and the performance of a large number of analyses the bureau of science has assisted coconut oil producers to increase their output and speed up their shipments in order that the oil might be available in the United States as a source of glycerine and for other purposes. In order to assist the War Trade Board and others the utilization of potash from the ashes of mangrove, copra cake, tobacco stems and waste, banana stalks, hemp waste, etc., and of sulphur deposits of Negros, Billiran Island, and other mineral resources have been investigated. The bureau of science has cooperated with the American Library Association Library War Service.

REORGANIZATION OF THE PHILIPPINE JOURNAL OF SCIENCE.

With the beginning of 1919 the sections of the Philippine Journal of Science will be combined, and the publication will be issued as a monthly. Each number will be larger than the present bimonthly issue. The policy with regard to the character and scope of the material published will be continued. As heretofore, the journal is intended to be the scientific organ of the Philippine Government, and will be devoted to the scientific and commercial interests of the Tropics, and its aim will be to collect and publish in one place original scientific information and material relating to the Philippine Islands.

COOPERATION AND PUBLICITY.

Besides the cooperation in war work with the Chemical Warfare Service and other military organizations that has been indicated under a former heading, the bureau of science has been largely consulted by and has been of considerable service to individuals and private concerns, as well as many branches of the Government, in substituting new methods of procedure and new materials for those that have been interfered with or interrupted by the war. The printed information contained in the Philippine Journal of Science, Mineral Resources, Press Bulletins, etc., has been in greater demand than ever before.

Cooperation has been given in purely scientific work, as well as along industrial lines. The courtesy of laboratory space and equipment granted to Mr. H. A. Lee, plant pathologist of the United States Department of Agriculture, who was sent to the Philippines over a year ago to study the diseases of citrus (lemons, limes, oranges, etc.), known as citrus canker, which had been accidentally introduced into the United States, and which was, and still is, causing losses to the citrus industry in the southern United States, has been continued. Similar courtesy has been extended to Dr. W. H. Weston, of the same institution, who was sent to the Philippines to study a disease of corn that has not as yet appeared in the United States. The disease is of so serious a nature that the authorities of the United States Department of Agriculture have deemed it

essential to obtain a prior thorough knowledge of the disease and definite knowledge of the life history of the fungus causing it in order that, should it be introduced into the United States, it might be intelligently controlled. Dr. Walter T. Swingle, chief of the division of crop physiology and plant breeding, United States Department of Agriculture, is another investigator who has utilized the facilities of the bureau of science during his stay in Manila.

Mining engineers visiting the islands with the object of investigating Philippine mineral resources have been extended every courtesy by the bureau of science and have availed themselves of its mineral collections and its technical reports and other publications with regard to Philippine geology. In systematic botanical work cooperation has been continued between the bureau of science and several institutions in neighboring countries. Assistance in obtaining cultures has been given to medical organizations in various parts of the world. Industrial and other material has been sent to various investigators.

MANUFACTURE OF TIKITIKI AND AUTOLYZED YEAST EXTRACTS.

Under the provisions of Acts 2376, 2714, and 2744 the bureau of science has continued its work of preparing extract of tikitiki for the treatment of infantile beriberi. A stock has been continually kept on hand, and during the year about 500 liters of extract have been prepared, probably sufficient to treat more than 10,000 infants, as compared with 400 liters of extract in 1917, 300 in 1916, 200 in 1915, and 58 liters in 1914. Formerly the death rate of infants afflicted with beriberi was 95 per cent, but by the use of this extract the rate has been reduced to practically nil, except where the cases are reported too late for satisfactory treatment. The greater part of the stock prepared was distributed through the Liga Nacional Filipina para la Proteccion de la Primera Infancia.

A certain amount of autolyzed yeast extract was prepared by the bureau of science for experimental work in the treatment of human beriberi, and this was used by Dr. N. M. Saleeby in cases of adult beriberi.

PROPOSED NEW SERUM LABORATORY.

The bureau of science serum laboratory is the only institution in the Philippine Islands where serums and vaccines can be manufactured. There is a constantly increasing local demand for antidyenteric, antimeningococcic, antitetanic, and other serums (on hand, being experimented with, or that are not manufactured owing to lack of room), as well as for vaccine virus, which demand it is difficult to meet.

Normally the bureau of science has manufactured 150,000 units of vaccine virus per month, but since April, 1918, the output has been about quadrupled, and still the reserve stock is very low. A contract is in effect with the Philippine health service for the manufacture of 300,000 units per month for 1919. Next year it will be necessary to increase the number of cattle in order to meet the demands of the Philippine health service and of the public. The bureau of science with its present equipment can greatly increase the output of serums and vaccine virus, the only limiting factor being stable room.

Arrangements have been made whereby the necessary part of the Alabang property south of the Mangagate River is to be transferred from the bureau of agriculture to the bureau of science. When the premises are in readiness to receive the serum and vaccine work, this branch of the scientific work will be removed to Alabang.

PREPARATION AND FREE DISTRIBUTION OF ANTITYPHOID VACCINE.

Under the provisions of Act 2743, the bureau of science has begun the preparation of antityphoid vaccine for free distribution. With the ₱5,000 appropriated the bureau of science has estimated that it can manufacture 21,000 1 c. c. ampules or doses of typhoid and paratyphoid A. & B. vaccine, which is sufficient for 7,000 persons, at the rate of 3 doses per person. The first vaccine was ready for distribution on November 7, and to date 3,030 ampules have been prepared and are awaiting distribution by the public-welfare board of the Philippine Islands.

GEOGRAPHICAL NAMES.

An executive committee, consisting of the directors of the bureaus of coast surveys, science, and posts, considers the spelling of geographical names submitted for action and reports its recommendations to the Philippine Committee

on Geographical Names. During the year 1918, decisions with regard to 1,986 geographical names were made, as compared with 367 in 1917. This completes all the municipalities and barrios in the Philippine Islands the spellings of which have been submitted for action.

CARNIVAL EXHIBIT.

Such of the subjects of scientific study and industrial investigation and of the products of the various activities of the bureau of science as can be exhibited, in so far as the available space of three compartments would permit, were shown at the 1918 Philippine carnival.

TECHNICAL AND SCIENTIFIC EMPLOYEES.

The bureau of science needs additional well-trained and able scientific employees in practically every line of endeavor, and should be immediately strengthened by good men in every line who could devote themselves aggressively to the big problems of Philippine industries and the development of industrial resources. The director was commissioned to secure an organic chemist and a geologist in the United States, but under existing conditions and the great demand elsewhere for such men was unable to do so in spite of the greatest effort. Now that the war is over men will be available, and a great many of the highest training and ability should be secured for the bureau of science regardless of the compensation.

BIOLOGICAL LABORATORY.

Routing examinations of water, milk, foodstuffs, blood, and sputum for gonococci and for plague, leprosy, cholera organisms, typhoid, and dysentery have been continued. A notable feature of this work is the number of examinations made for the Philippine Health Service in connection with the campaign for the detection of carriers of typhoid and dysentery bacilli. Cholera appeared in Manila in September, and, though the outbreak did not prove extensive, it caused a great increase in the number of examinations required for purposes of diagnosis and of detection of carriers.

As heretofore, bacteriologists have been assigned from time to time for microscopic diagnosis on leper-collecting expeditions of the Philippine Health Service. A few health officers were sent by the Philippine Health Service to the bureau of science to take the course of laboratory instructions reported last year under the heading "Instructions for District Health Officers."

Research has been begun in connection with the recent severe influenza epidemic, and that on nonagglutinating cholera vibrios and pathogenic fungi has been continued. There still remains in the Philippine Islands a fertile field for medical research.

BOTANY.

Botanical exploration of the archipelago has been continued and extended by valuable collections made from the little known parts of Panay, Ilocos Norte, Rizal, and Camarines Provinces.

The collections of Philippine plants have been studied and identified and the new species described as received, those from Panay and from Ilocos Norte having been noteworthy in the number of forms new to the archipelago and to science. Since the beginning of botanical work in the bureau of science material, assembled as far as possible from all parts of the archipelago, has received systematic enumeration as a necessary preliminary to the preparation of a general flora.

Mr. Peter Nelson, of the Guam Experiment Station, who had undertaken a botanical exploration of Guam with the first \$100 from the Robinson memorial fund of the New York Botanical Garden, has already submitted material, amounting to about 200 numbers, to the bureau of science.

A continuation of the work on Philippine fungi has resulted in practically completing an enumeration of all-known Philippine fungi with their essential synonyms. Some work has been carried on on plant diseases. The extensive work over periods of years on the vegetation on Mount Maquiling has been submitted to the printer under the title "The Vegetation of Philippine Mountains; the Relation of the Environment to the Physical Types at Different

Altitudes." The compilation of data regarding local medicinal plants has been continued.

The herbarium has shown a satisfactory growth in Philippine accessions during the year. Foreign exchanges have been reduced to a minimum on account of transportation difficulties and the general inhibiting effect of war conditions. The total accessions for the year are 10,086 specimens, as compared with 12,711 specimens in 1917. There are now 196,205 mounted specimens in the herbarium.

FISHERIES.

This work has continued, as heretofore, in cooperation with the other branches of the bureau. A scientific assistant has been added and numerous small collections of fishes have been studied and identified. A large number of inquiries with regard to various fisheries, fish ponds, etc., have been answered.

A supply of mosquito fish is continually kept on hand for distribution and several lots have been distributed to those who have applied.

The bureau of science has a collection of cobras from which it is segregating venom and is experimenting in the manufacture of anticobra serum. Formerly it was believed that the dahon palay was a very poisonous snake and was responsible for many deaths of harvest hands. For a long time it was believed that cobras were rare in the Philippines. As a result of careful study by specialists of the bureau of science it has been shown that they are comparatively abundant and probably deaths reported from the bite of the dahon palay actually result from that of the cobra. The cobra normally is a very shy snake and probably promptly retreats after biting, so that when a person has been bitten in a rice field and the area is surrounded, the cobra has already escaped. The dahon palay being prevalent is usually found and the biting attributed to him.

As it is now death probably always results from the bite of the cobra, and a successful serum will save many lives.

ORNITHOLOGY AND TAXIDERMY.

The work of the section of ornithology and taxidermy has been continued along the former lines and has diminished neither in quality nor in quantity. A large amount of additional data has been collected on the food of birds, and specimens have been added to the scientific study collection of Philippine birds. Large collections of birds, plants, and insects were made in Antique Province, and some additional information on the food of birds was collected at the same time. The birds and plants will be reported by the bureau of science. The insects have been sent to various specialists for identification. One paper on insects has already been received for publication. Other collecting trips were made into Bulacan and Pampanga Provinces. The important study of the food of birds, especially those that seem to damage crops, has been continued by the examination of the stomach contents in the laboratory, in so far as other work permitted.

ENTOMOLOGY.

The need for the closest cooperation between bacteriologists, entomologists, and other scientists is continually manifest. For example, in the United States there are two very bad bacterial bee diseases, and scientists should work together to prevent their introduction into the Philippine Islands. The Administrative Code of 1917 (Act No. 2711), section 1883, provides that "Silkworms, their eggs or cocoons, or the moths which produce silkworm eggs, shall not be imported into the Philippine Islands except by the bureau of science." Legislation similar to this is in effect with regard to bees in the Hawaiian Islands, and the Territory of Hawaii has been successful in preventing the introduction of deleterious diseases into that Territory. Domestic bees have been successfully introduced from Hawaii into Guam without the introduction of any disease. If they can be successfully maintained in the Philippine Islands without the introduction of disease it is believed that there is an excellent opportunity for their cultivation.

The bureau of science has continued to raise silkworms and to distribute eggs to persons prepared properly to care for them.

CHEMICAL LABORATORY.

Some very good Filipino analysts are being developed from graduates of the local universities. The field of industrial chemistry is opening up in the Philippines, and the bureau of science must have trained industrial chemists and not merely analysts.

Owing to the number of chemists in the bureau of science who have volunteered for war work, or who have left the Government service, fewer results have been prepared for publication than in any previous year. However, work along industrial chemical lines in the Philippines is constantly increasing and it is believed that the bureau of science has been more frequently called upon for, and has given, more advice with regard to industrial problems than heretofore.

GENERAL, INORGANIC, AND PHYSICAL CHEMISTRY.

Routine.

The routine work has been greater in variety than in former years.

The refining of Philippine gold and other precious metals always has been done in the United States until it was undertaken by this division about six months ago in connection with the assaying work. Gold bullion as it comes from the mine is too impure and too brittle for the manufacture of jewelry. Therefore steps have been taken to carry on the refining of gold in the bureau of science in order to encourage local gold-mining enterprises and at the same time to aid both the jewelers in securing a supply of gold and the Government in preventing jewelers from melting American gold coin for jewelry purposes.

The standardization of coconut shell was undertaken at the request of United States Army authorities in connection with the coconut shell "buying campaign," which was initiated by the procurement officer of the Chemical Warfare Service.

Several tons of coconut shell charcoal have been prepared by the bureau of science in order to assist the Chemical Warfare Service in setting a standard as to the percentage of volatile combustible matter that charcoal purchased by the United States Government should be allowed to contain.

Experiments on the comparative gas-absorption power of charcoal prepared from coconut shell, mangono wood, and lumbang and pill shells have been made with a view to determining the efficiency of charcoals prepared from materials available in commercial quantities in the Philippine Islands.

The bureau of science has received many inquiries with regard to the type of furnaces used in glass making and in brick burning. To answer these the bureau has prepared a design for a glass furnace with a capacity of approximately 5,000 bottles and a design for a brick furnace with a capacity of 5,000 bricks. There has been a demand for the plan of the bureau of science limekiln.

Investigation.

Large-scale experiments prove that wood and coconut shells are cheaper and more convenient fuels for limestone burning than coal.

During the coconut shell buying campaign initiated a few months ago by the Chemical Warfare Service of the United States Army, a market which did not before exist was created for coconut shell. The demand for coconut shells was met at very reasonable prices, often as low as ₱8 per metric ton, delivered to the nearest railroad station. After the war was over the demand for the coconut shell came to an end also. However, it is believed that the results obtained by the bureau of science with coconut shell in limestone burning will give new incentive to those who have been supplying the Army with this fuel.

The present war has brought about a shortage in glass bottles and other ordinary glass articles as well as an increase in their price. The results obtained by the bureau of science in its glass-making experiments are very encouraging, and prove that glass bottles, demijohns, glass jars, etc., of good quality can be manufactured from Philippine materials.

Studies made by the bureau of science on lumbang oils have created a great deal of interest among oil manufacturers. Several local concerns who heretofore have devoted their efforts exclusively to the manufacture of coconut oil are now turning their attention to the manufacture of lumbang oils in commercial quantities.

The importation of pig iron into the Philippine Islands is increasing considerably from year to year, and the bureau of science has made some investigations in order to ascertain the conditions peculiar to the smelting of iron ores found in the Philippines with the object of stimulating the production of good grade pig-iron castings.

A study of the mechanical properties of Philippine coir and coir cordage as compared with abaca, and also a study of the mechanical properties of Philippine bast fiber ropes, have been completed and manuscripts on these subjects prepared.

Investigations made by the bureau of science have served private enterprises as the working bases in the development of industries formerly unknown in the Philippines. The Philippine By-Products Co. has recently been established to exploit especially the recovery of potash from the ash of tobacco waste, copra cake, and other plant wastes. Other by-products which up to the present time are largely being wasted, but if properly developed may become a source of income to the islands, are glycerin, molasses, bromine, iodine, tannin, bleaching powder, chloroform, acetic acid and its derivatives, wood alcohol, and several other products derived from the dry distillation of woods, etc.

ORGANIC CHEMISTRY.

The work of the division is very important and requires the services of men with experience, particularly those who have specialized in food analysis and drug analysis in addition to organic chemistry. The routine analytical work comprises official and private analyses of oils, fats, and waxes; all classes of foodstuffs, both imported and domestic; native drugs and proprietary medicines; opium assays, toxicological examinations, and other work of a chemico-legal nature. The demand by the medical profession for clinical analyses has been somewhat excessive and shows that medical men attach increasing importance to careful chemical analyses of blood, urines, and feces.

Aid has been given to the insular oil industries not only by performing their chemical analyses, but by personal visits to the factories and by investigations of their minor problems. Copra produced in the Philippines by the sulphur dioxide method has received most favorable comment from the mill men. Much work has been done among the distilleries in aiding them to gain a greater production of alcohol from molasses, a product which until recently had been largely a waste product in the Philippines.

The Iloilo sugar laboratory has been reequipped and opened for continuous service to the sugar industry in the Philippines.

The plant for the manufacture of extract of tikitiki has been segregated in a well-equipped room and is now operating under perfect conditions. Samples of the extract kept for over a year show no signs of deterioration. All demands for the extract have been filled promptly and the product has given the greatest satisfaction.

Work of an investigational nature has been seriously curtailed by the lack of personnel as well as by the increased demands made for outside consultation work and by the greater number of more complex time-consuming analyses that have been performed. Nevertheless, the work on the chemical investigation of medicinal plants has been continued and valuable results achieved. Methods and standards have been formulated for the preparation of the main Philippine prepared foods and such standards have been accepted by the board of food and drug inspection. The foods for which standards have been made are the bagoongs, patis, tinto dulce, tinto seco, and others.

DIVISION OF MINES.

The number of inquiries that have come during the year from the general public has been very large and several hundreds have been answered. Consultations with mining prospectors and operators, determination of mineral and rock specimens, and the examination of rocks of various classes have taken a great deal of time.

Because of the limited personnel it has been impossible to keep up the usual quota of field work. In addition to the routine demands, a reconnaissance trip was made to the coal properties of Mr. Esteban de la Rama, at Escalante, Occidental Negros. In April and May a geological reconnaissance of Lubang and the neighboring islands was carried on for the purpose of determining the extent and quality of quartzose sand deposits reported to have been found in

those islands. In response to a request from the United States War Trade Board regarding sulphur deposits in the Philippine Islands, a general reconnaissance of the sulphur deposits at Silay, Occidental Negros and southern Camiguin Island, Misamis, was made during the months of August and September. Unfortunately, the deposits are of small extent and of no great commercial value. In October various coal mine properties which are being developed and operated on the Island of Cebu were visited. Additional information was gathered with regard to raw cement materials found in the vicinity of Naga, Cebu. Several smaller investigations were made.

In spite of war conditions, which have greatly affected the cost of transportation of mining machinery, fuel, and chemicals used in the mining industry, Philippine mining has made progress during the year. Coal mining activities have been revived. The Philippine National Coal Co. anticipate a large output in the near future. Prospecting of several of the Philippine oil fields has been resumed and Mr. Anderson is continuing the development of his oil and asphalt properties in Leyte. The Colorado Gold Mining Co., of Masbate, stopped operations for a few months in order to repair and remodel its mill. The Syndicate Mining Co. mill at Aroroy, Masbate, has been enlarged. Severe storms caused the sinking of some of the dredges, which considerably curtailed the gold production. New and promising galena veins have been reported from Marinduque, and it is understood they are being developed. Prospecting and testing of new placer grounds in Mindanao also have been reported. Considerable interest has been shown in the copper deposits in Mancayan and Suyoc, and testing of the placer ground along the Abra Valley is being carried on. The Benguet Consolidated Mining Co., in the Mountain Province, has shown increased gold production.

The responsibility of this branch of the bureau of science is entirely too great for the personnel available. In order to be acquainted with mining operations and to undertake the necessary geologic work the bureau of science should have at least two geologists, a mining engineer, and a metallurgist, besides the necessary minor employees. Furthermore, other coal mines will no doubt begin operation soon, and, according to the law, the bureau of science is responsible for the proper inspection of such operations. Also, the oil and coal fields of Mindanao should receive detailed study with regard to their economic value. The personnel should be increased with these growing activities, and the reported valuable mineral resources, such as tin in Palawan and cinnabar in Palawan or Buruanga Island should be investigated.

LIBRARY.

The total number of bound volumes accessioned was 3,498, making a total on December 31, 1918, of 42,218 bound volumes, 4,268 unbound volumes, and 21,121 unbound pamphlets and parts.

POWER PLANT.

During the year 1917 the bureau of science experimented with, and recommended the use of, copra cake as fuel under boilers. Since August, 1918, this fuel has been used in the bureau of science power plant. This was not done sooner, due to the difficulty of securing a regular supply, and even now with an insular government contract deliveries are made with much irregularity and coal frequently has to be used; but the use of copra cake under the boilers has effected a considerable saving.

AQUARIUM.

The aquarium of the bureau of science has continued to be much appreciated. It is clearly one of the most attractive features of Manila and is largely patronized by visitors in the city. Many new, interesting, and beautiful specimens were added to the collection.

RECOMMENDATIONS.

The bureau of science needs additional specialists in all its branches, especially in geology and industrial chemistry to care for the rapidly developing mineral and economic industries. Without the employment of these there is a grave danger that the development by the Government of such industries in the Philippine Islands will be discredited. Much important constructive work in

the bureau of science that should have been done has remained undone for lack of personnel, and there is the keenest need for the extension of economic research in every line.

With regard to the specific needs of the bureau of science, many of those that have been pointed out in former reports have not yet been realized for lack of personnel, but the necessity is as keen as ever. There is wealth in the Philippine Islands that remains untouched due primarily to inadequate investigation. Successful economic development of the Philippines must be preceded by adequate research.

WEATHER BUREAU.

METEOROLOGICAL DIVISION.

Weather and typhoons.—One depression and six typhoons have traversed the Philippine Islands during the year 1918. With the exception of only one, of which we shall speak presently, not much damage was done by them while crossing the archipelago. They were distributed by months as follows: One depression in March; one typhoon in each of the months of June, July, and August; two typhoons in October; and one in December. The three typhoons of June, July, and August passed between Luzon and Formosa, while one of the two typhoons of October touched only the northeasternmost part of Luzon to the east of Aparri. The other typhoon of October was somewhat deformed, at least when it crossed the Philippines through the central part of Luzon.

The last and worst typhoon of the year, which will go down to history as a most remarkable one, was that of Christmas day. It proved to be very destructive, particularly for the Provinces of Sorsogon, Albay, and Romblon, and caused the wreck of the steamer *Quantico* on the western coast of Tablas Island. Several other smaller vessels were also victims of the storm. As it has been stated, this typhoon was very remarkable, not only because of its appearance toward the end of December, when typhoons are hardly ever observed in Luzon, but most particularly on account of its abnormal track and the unexpected change of direction which it undertook just one day before it struck the Island of Luzon. The typhoon was noticed by Manila observatory as early as December 20 to the South of Yap.

Of all the other typhoons of the Far East, the most important is the one that struck Guam in the early morning of July 6, doing great damage to the buildings, roads, trees, etc. It is considered one of the most violent typhoons that have crossed that island in many years. Its track was at the beginning so inclined to the west that great fears were entertained for the central and northern part of Luzon. But fortunately for the Philippines, a slight inclination to northwest began to take place in the direction of the typhoon on the 7th, until on the 9th to 12th it moved north toward Japan.

Manila Observatory has sent during the year to the foreign observatories of the Far East 100 typhoon warnings as against 82 during the preceding year, and 101 in 1916. This number would have been even greater were it not for the extraordinary delay with which weather reports from foreign stations, particularly from Japan and the Loochoos, have been received during the whole year 1918.

While there has been so much trouble in sending and receiving telegraphic weather reports to and from foreign observatories, the telegraphic service established in 1916 between Guam and Manila, through the effective cooperation of the naval authorities of Cavite and Guam, has been proved most satisfactory up to the present.

Although the total amount of rainfall for the year 1918 in the Philippines is rather above the normal, yet there was a general lack of rain during November and the greatest part of December, which was in several Provinces highly detrimental to agriculture.

The number of barometers compared and tested this year is 99 as against 112 in 1917.

As in previous years the Weather Bureau has cooperated with the work of foreign observatories as well as of other Government offices or private institutions in and outside of Manila.

SECONDARY STATIONS.

During this year the first-class station of Ormoc and the third-class station of Bolinao have been reduced to third class and to a rain station, respectively, while the rain station of Batag has been raised to a third-class station. A new

official rain station was established in Camp Keithley, Lanao, in the month of May, although the salary of the observer up to January 1, 1919, had to be paid by the Department of Mindanao and Sulu through an agreement made between Gov. Carpenter and the director of the weather bureau.

At Tigaon, Ambos Camarines, a new seismic station was opened on April 26, and meteorological observations similar to those of a third-class station have been also taken there regularly. As in the preceding years, meteorological observations similar to those of second-class stations and rain stations, respectively, have been likewise made at the seismic station of Ambulong and the magnetic station of Antipolo. Aside from these three, the official meteorological stations maintained by the weather bureau at the end of 1918 were 57—1 branch observatory at Bagulo; 6 first-class stations, 4 of them in Luzon, and 2 in the Visayas; 11 second-class stations, 5 in Luzon, 4 in the Visayas, and 2 in Mindanao; 29 third-class stations, and 10 rain stations.

Twenty-one new volunteer or cooperative stations have been added during the year to the 32 in existence at the end of 1917, thus making a total of 53 volunteer stations.

SEISMIC DIVISION.

The year 1918 must be considered as one of extraordinary seismic activity in the Philippines. The seismographs in the weather bureau recorded more than 500 disturbances, most of which occurred within the limits of the archipelago. One hundred and twenty of these disturbances were felt in different parts of the archipelago. Unfortunately, two of them caused great damage and claimed some victims in southern Mindanao and Batanes Islands.

Among the distant earthquakes recorded, mention must be made of one which shook eastern China in February, causing damage in Fowchow. Southern California was shaken by a relatively strong one in April, and in May, La Serena, Chile, suffered great destruction.

Southern Mindanao was horribly shaken on the 15th of August by one of the greatest disturbances of the earth. It shook the southern coasts of the Cotabato district, destroying houses, opening cracks in the ground, and causing landslides on the hills. Immediately after a wave tide invaded the land, carrying everything and drowning a great number of persons and animals.

Nearly a month later, on the 13th of September, an earthquake of like intensity but of very limited extension shook the two main islands of the Batanes group—Batan and Sabtan—completely destroying the two towns of Ivana and Sabtan, situated, respectively, on the west and on the east coast of the said two islands. On examining the ruins of these two unfortunate towns one is convinced that the principal cause of such tremendous damage was the too heavy and faulty constructed roofs of the houses, the timbers, being without any connection, pushing the walls on which they were embedded. It can partially also be accounted for by the condition of the soil. An inspection was made by the weather bureau to this district, and a recommendation was afterwards made as to the reconstruction of damaged buildings.

During the month of April a new meteorological-seismic station was opened at Tigaon, Ambos Camarines. This station was considered necessary after the seismic period occurred in the region of the Isarog Mountain in October, 1917.

Since the month of May there have been in operation seven provincial stations with special seismographs—Ambulong, Bagulo, Tigaon, Sorosogon, Mambajao, Butnan, and Agafia, Guam.

MAGNETIC DIVISION.

The routine work of this division has been continued during the year 1918, like in former years, without interruption, both in the central office and in the magnetic observatory at Antipolo. Early in the year the hourly observations or magnetic report of 1911 was distributed, while that of 1912 is being printed, and the year 1913 is ready for publication.

The magnetic character of this year may be considered as mild; the number of calm and nearly calm days exceeding notably the disturbed. Their respective numbers are as follows: Calm, 184; slightly disturbed, 209; disturbed, 22. Only six of the disturbances may be reported on account of their duration and general nature.

During the hours corresponding to the total solar eclipse, which on the 8th of June was visible across the United States of America, special observations were

taken in cooperation with and upon the request of the department of terrestrial magnetism of Washington. These observations have been published in the review, "Terrestrial magnetism and atmospheric electricity," issued by the said department.

ASTRONOMICAL DIVISION.

Time service.—Every day of the year, including Sundays and official holidays, time signals have been sent during five minutes (10.55 to 11 a. m.) from the observatory to all the stations connected by telegraph or cable with the central post office of Manila. At noon the time ball has been dropped in the central observatory. With the kindly cooperation of the Cavite Naval Radio Station, time signals by radio are sent every night during five minutes (9.55 to 10 p. m.). It is to be acknowledged with thanks that this service has been rendered possible by the courtesy and interest taken for the utility of shipping by the bureau of posts. The Manila central post office keeps an employee who every night at 9.50 establishes the necessary connections between Manila Observatory and the Cavite Naval Radio Station.

One hundred and forty-four chronometers have been received in the observatory to be rated; 7 clocks and, as an average, 20 chronometers, have been daily compared with the standard clock and rated.

In order to know the error with which the time signal at noon is given the initial moment of the fall of the time ball has been recorded 116 times in the chronograph in connection with the standard clock. The largest recorded errors were:

Sec.	Sec.	Sec.
0. 32, January 21.	0. 45, June 29.	0. 45, September 14.
. 40, February 6.	. 34, August 24.	. 32, September 30.
. 34, June 24.	. 45, September 13.	. 33, October 23.

The average error of the 116 records is less than 0.2 second.

Three hundred and twenty-five observations on solar radiation were taken during the year with the Angstrom compensating pyrhellometer. The Callendar's sunshine receiver and electrical recorder has been working satisfactorily throughout the year.

A considerable amount of time has been spent in the library for the good maintenance and cataloguing of publications, in showing visitors the observatory, to some of which an opportunity has been given, in favorable conditions, to see the moon or some other celestial objects, and in answering several letters asking about subjects connected with astronomy.

PERSONNEL.

Nationality.—The composition of the personnel of the weather bureau as to nationality has remained practically unchanged, over 91 per cent being Filipinos.

IMPROVEMENTS.

The central office has been furnished with a so-called "indicating anemometer," which will enable the forecaster and the employee on duty to observe at any moment from their desks the actual velocity of the wind.

RECOMMENDATIONS.

1. A number of telegraphic stations of a more permanent and consistent character than the present ones should be established, by wireless or otherwise, well distributed throughout the archipelago, and most particularly along the eastern coasts. The following places are suggested as the more convenient for the purpose of forecasting the most dangerous typhoons that come from the Pacific: Surigao, Guluan, Batag, Virac, Polillo, Casiguran (Tayabas Province), and Cape Engaño.

2. A law should be enacted establishing in the Philippines a compulsory installation of wireless equipment in all interisland steamers with a displacement of 100 tons or more, thus enabling all the captains both to receive all the typhoon warnings, which are issued daily and even twice or thrice every day by Manila Observatory, and to furnish us their own observations, which may frequently prove to be of great value for further accurate forecastings

on the direction and intensity of typhoons. During the Christmas typhoon mentioned above a typhoon warning sent by Manila Observatory to the captain of the steamer *Viscaya* at about noon of the 25th was of great value to him, and the same might have been the case with the captain of the steamer *Quantico* had the latter been provided, like the *Viscaya*, with wireless equipment.

3. As in many cases typhoons give only a limited time for the issuing of proper warnings, it is highly recommended that the central office of the weather bureau be provided also with an adequate wireless equipment which may allow direct communication between Manila Observatory and the interisland steamers. It is the opinion of this department that the advantages to be derived therefrom would more than fully compensate the expenses of this installation.

AGRICULTURAL COLONIES IN THE PROVINCE OF COTABATO.

Climatic conditions have also affected these colonies, especially those in the Rio Grande Valley, so far as rice is concerned. The unprecedented flood in the month of June, followed by a dry spell, completed the destruction of the entire crops. There have only been harvested from various colonies 2,528 cavans of rice, as compared with 11,509 cavans in the year 1917. On the other hand, the corn crop has been fairly well and a total harvest amounting to 6,488.36 cavans has been gathered. For the purpose of encouraging the colonists in the improvement of their homesteads, there has been established in each of these colonies a standard homestead. Prizes consisting of animals and agricultural implements will be awarded to those who have shown their diligence and succeeded in their efforts to place their holdings up to the standard of the one established as model.

There has been established during the year about 3 kilometers of dike from Pikit to Pagaluñgan. It is proposed to extend same to Talitay, with an equal distance. This extension will afford protection to about one-third of the colony No. 1 and one-half of colony No. 7. There has also been opened a canal, at a cost of ₱554, between Dunguan and the headquarters of colony No. 5 in Pagaluñgan. This canal will afford means of transportation between these two points. A trail was at first thought of, but the scheme had to be abandoned on account of its expensiveness.

During the year smallpox epidemic, followed by another epidemic known as grippé, has broken out among the colonists, of which 95 per cent have been victims. These epidemics have greatly affected the crops in colony No. 2 and part of colony No. 5, the first being composed of Maguindanaos and the latter about 50 per cent of the colony.

There have been purchased during the year 22 heads of carabaos for colonies Nos. 1 and 5, either to substitute the dead animals or those who are too old to be devoted to agricultural works. There is a pressing need for the acquisition of carabaos for the use of the colonists, but due to the shortage of funds at this time, there seems to be nothing that can be done toward this end. There has been also ordered for the purpose of experimentation a Fordson tractor, to be assigned to colony No. 1.

The total area cultivated in these colonies is 2,262.20 hectares, of which 1,173 hectares are planted to corn, 509 hectares to palay, 42.16 hectares to sweet potatoes, and 20 hectares to mongos. The rest is planted with miscellaneous agricultural products.

Corn harvested amounted to 6,448.36 cavanes; rice, 2,526.28 cavanes; tobacco, 1,817 bundles; sugar cane, 2,016 kilos; sweet potatoes, 94 cavanes; mongos, 43 cavanes; and ube, 30,660 kilos.

In general, it may be stated so far that the colonies in the Department of Mindanao and Sulu, excepting Momungan, have been a success. The advances to colonists, which were stopped last year (1917), has continued during the year 1918 with the same result; that is, the colonists were self-supporting, and they do not require any assistance save in few instances, such as transportation to and from the hospital in case of sickness and the purchase of carabaos for those who need them, they being unable to pay its high cost in cash.

Judging from the results so far obtained in these colonies the Government's supervision may be withdrawn in the near future unless circumstances arise which may defeat this expectation, thus making the colonists inhabiting them independent landowners, thereby achieving the purpose of the Government in establishing the agricultural colonies in these islands.

AMERICAN AGRICULTURAL COLONY.

MOMUNGAN.

The admission of the Filipino colonists, as provided in the Legislative Acts Nos. 2254 and 2280, as amended by acts Nos. 2666, 2672, and 2711, has required a greater portion of the colony administration during the year. At the beginning of the year 14 new colonists were admitted—namely, 2 Americans and 12 Filipinos—and in August of the same year 2 more Filipino members were added. At the beginning of the year there were 28 colonists—24 Americans, married to Filipino women, and 4 widows of Americans. During the year 1 American colonist died, 1 Filipino colonist was expelled, and another colonist was removed from the American colony as a prisoner of war, the latter being a German subject.

Some radical measures have been resorted to in dealing with the recalcitrant colonists and those who would not work and always look to the colony stores for subsistence. The colony superintendent has found some difficulties along this line and has been instructed by this department to issue the corresponding warning to those who are concerned for the purpose of impressing their duties upon them as colonists under the Government. In most instances colonists who have been for some reason or other expelled from the colony were substituted by others willing to assume the indebtedness, obligations, and responsibilities incurred by the former with the Government.

About one-third of the colony is now surrounded with barbed-wire fence, making it hog proof, but on account of lack of funds no further attempt has been made to complete the fence. On account of the defective protection given to the plantations in the colony, which exposes them to the attacks of wild animals, it is estimated that about ₱5,000 worth of crops have been lost during the year. This may have some reversing effects upon the colonists, but it is expected that sufficient funds may be secured from the legislature for the entire fencing work.

The crops of this colony have been a failure during the year on account of climatic conditions. In the first place, there was excessive rainfall during the months of January and February, which destroyed the greater portion of the crops. Due also to the excessive spells of drought, the crop of rice has suffered damage to the estimated value of ₱11,392, while the amount harvested was only ₱450. The plantation of corn has also suffered damage to the extent of ₱4,255, due to drought and attack of wild hogs. Also the sweet potatoes have suffered damage to the extent of ₱900, while 4,682 kilos, amounting to ₱280.92, were harvested. To sum up the crop during the year, there have been harvested crops amounting to ₱8,294.59, while the value of the loss has been estimated at ₱26,500.

The principal crops in this colony are corn, rice, sweet potatoes, peanuts, and beans. There are also 3,000 trees of kapok, which seem to be thriving well and promise a good result. Experiments have also been undertaken with regard to the plantations of coconuts and abaca, which also seem to be doing well. Coffee is also one of the crops in the colony which is at present showing prolific and vigorous growth.

There have been established in this colony a rice mill and a corn mill. Due to the failure of crops this year, however, these mills have not been in constant operation, but it is expected when normal times come that they should be constantly kept busy milling the produce of the colonists. There has also been established an agricultural cooperative association, denominated Momungan Cooperative Agricultural Association, for the purpose of cooperating with the Government to make the colony a success. In this association differences between the colony administration and the colonists are being adjusted. The colonists are also invited to make suggestions through the association for the best interests of the colony. For purposes of recreation and social development, the Momungan Colony Club and the Momungan Colony Orchestra have also been organized.

There has been a scarcity of labor in this colony, and in certain instances laborers were imported from a hacienda at Ilagan, Lanao, which were given a salary of from ₱15 to ₱18 per month, with subsistence. This is, of course, burdensome to the colonists, but this is the best way which can be done at present in order to place the greatest area of the colony under cultivation.

BOHOL FILIPINO RICE COLONY.

With the exception of lot No. 71, all lots in this colony are already occupied. There are now 99 colonists cultivating an area of 204,981 hectares for rice plantation, besides a considerable extension devoted to the planting of corn, sweet potatoes, and the like. The crop of rice has also been affected by unfavorable weather conditions, by rats, and birds, and 27 per cent thereof was lost due to unfavorable weather. On this account the crop in 1918 can not be favorably compared with that of 1917.

The share of the Government of the rice crop amounts to 31,763½ kilos, 10 per cent of which was given to the superintendent, 19,282 kilos were sold, and 1,276 were lost, due to rats, which have always infested this colony, drought, and other causes; 1,361 kilos were distributed as seed, and the remainder has been held for sale in the store of the colony.

The legislature has granted an appropriation of ₱19,000 to this colony, out of which a sufficient amount will be set aside for the construction of a market. This will facilitate the sale of colony produce.

With the erection of a school building, through the voluntary help of the colonists, the long-felt need of the colony children will be filled.

No change in the personnel has taken place in this colony during the year.

As stated in the previous annual report, the climate in the colony is very healthful. Sanitation has been satisfactory throughout the year. Since the foundation of the colony only five persons died of different diseases; two of them were newly born babies.

The extension of this colony has already been approved, and the necessary appropriation therefor has been granted by the Philippine Legislature. Steps are now being taken to have the additional ground surveyed, and a survey party will shortly proceed to Bohol for this purpose.

CAGAYAN FILIPINO RICE COLONY.

Out of 153 lots into which this colony is divided, 108 are now being occupied by the colonists. The remaining 45 can not be made available for occupancy on account of forest found therein. There are approximately 638.22 hectares now under cultivation which are now planted with palay, corn, farm vegetables, and fruit trees. The following tabulation shows the progress of the colonists in this colony:

	Rice.		Farm vegetables— Number of hectares planted.	Corn— number of hectares planted.
	Early varieties— Number of hectares planted.	Late varieties— Number of hectares planted.		
Parcel No. 1.....	35.00	150.00	37.00	40.00
Parcel No. 2.....	45.00	236.77	64.00	30.00

Due to small number of occupants and the shortage of draft animals, the increase in the area under cultivation is rather slow. There are two yearly crops of rice in this colony—one what is called the early variety and the other is the late variety. From the first there has been harvested 22,074 cavares of rice, while the second is reported to give a good yield, the amount of which is still unknown at the date of this report.

The corn plantation during the year has resulted in a total failure, due to the scarcity of rain and the early visit of typhoons and also to the attack of wild hogs and other wild animals around the colony. From an experiment made it is shown that tobacco in this colony grows well and will produce a good income to the colonists. An effort is now being made to devote a much more extensive area to the cultivation of this plant. It is gratifying to note that every family has taken up the raising of chickens, which promises a good result.

The colony has also undertaken the construction of an irrigation system worked out by the colonists and by some outsiders. About 4.2 kilometers in extension has already been finished. With the completion of the work of this irrigation system it may be hoped that the colony will not in the future have to depend upon weather conditions. The failure of this colony in the past has been

largely due to the uncertainty of weather. There were times when rains were so excessive that they practically killed the crop; there were times when the Rio Grande de Cagayan overflows its banks to the destruction of the plantations within this colony. The same thing may be said also as to scarcity of rain, which is fatal to agriculture.

In general, the sanitary condition of the colony has been good during the year, there having been no severe diseases with the exception of the last epidemic of Spanish influenza, of which four of the colonists were victims.

There are now in this colony 600 inhabitants with 15 children born during the year, 5 being males and 10 females. One of the greatest needs of this colony is the establishment of a school in parcel No. 1 and the detail of an insular teacher in charge thereof. This department is very anxious to have this school established and will attempt to take the matter up with the bureau of education authorities.

Even though none of the colonists in this colony has fully paid up his debt to the Government, the financial condition is better than that of the preceding year.

There is a pressing need in this colony for the purchase of more carabao. There are at present 13 colonists who are in dire need of this animal for use in their homesteads. An attempt will be made to secure sufficient amount of funds from the legislature for the acquisition of labor animals for this colony.

FOOD-PRODUCTION CAMPAIGN (ACT 2723).

Rice seed selection.—When the department of agriculture and natural resources started the food-production campaign under Act No. 2723 it was about harvest season of 1917. The first work undertaken, therefore, was the selection of seed rice. A program was at once laid out and the number of men to supervise and actually carry on the work in the field determined according to the relative importance of the rice Provinces. Field selection was carried on in Ambos Camarines, Batangas, Bulacan, Cagayan, Cavite, Ilocos Norte, Ilocos Sur, Iloilo, Laguna, La Union, Nueva Ecija, Pampanga, Pangasinan, Rizal, Tarlac, Tayabas, and Zambales—17 Provinces in all. One hundred and ninety-two foremen and 1,205 laborers were employed. In addition to these, many farmers furnished laborers to work with the Government-paid men, but their number is not known exactly. The amount of seed rice selected was 986,526 kilos, or approximately 31,291 cavans. If all this selected seed rice were to be planted it would produce a crop of 625,820 cavans at the rate of 20 cavans per cavan of seed. Supposing that each cavan of selected seed yields but 10 per cent more than ordinary seed yields (although a normal increase of 20 per cent is not unreasonable), it will be seen that the increased yield directly traceable to the beneficial effect of selection will amount to 62,582 cavans. At the average price of ₱5 per cavan, which is a low estimate for this year, the increased crop alone is worth ₱312,910. The total expenditure for the seed selection of 1917-18 harvest season was about ₱40,000. A larger force was employed for the 1918-19 season, and 23 Provinces, as against 17 for 1917-18, were covered. Three hundred and fifteen foremen and 24,027 laborers were provided for. The total estimated expense was ₱91,170. Although the personnel provided for the 1918-19 seed-selection program was larger, as is also the territory covered, than that provided for the 1917-18, the result of the work may not be in direct proportion to the size of personnel and extent of territory, for the reason that the last harvest season coincided with the *trancazo* epidemic.

Corn campaign.—The work for greater corn production consisted in the main of distributing seed corn either by sale, by loan, or by donation to encourage and urge the farmers willing to help plant a greater area to corn. All told, the bureau of agriculture distributed 396 cavans. As a measure of stimulating greater interest in corn as food ₱1,000 financial aid each was given to Albay, Batangas, Cagayan, Ilocos Norte, Ilocos Sur, Isabela, La Union, Leyte, Misamis, Nueva Viscaya, Occidental Negros, Samar, and Sorsogon—13 in all—and ₱500 to Abra. With these allotments the municipalities of the Provinces mentioned were able to hold corn demonstrations on a larger scale than heretofore by using the department money to augment the municipal appropriations yearly set aside for this purpose. From partial reports received to date, in Ilocos Sur 8,775 people were served at the food demonstration; in Abra, 11,475; and in Sorsogon, 5,604.

In view of the fact that the bureau of agriculture has no appropriation for growing corn on a commercial scale for distribution as seed, the department allotted ₱13,000 for corn-breeding work at the La Carlota Experiment Station.

The object in view is to breed a variety of corn that will be suitable to Philippine conditions and to grow seed corn on a large scale for distribution. The work was begun in October, 1918, and by the end of the year variety tests of different kinds of corn obtained from various localities were under way. Work has now been commenced on the growing of seed corn on a large scale, although no figures are available as to the extent of area cultivated, etc.

Home gardens.—As a means of affording an immediate increase in the food supply of every household the laying out of home gardens was strongly advocated by the department. The field men were instructed to place emphasis on this feature of the work and to encourage the formation of one provincial food committee in each Province and municipal food committee in each municipality and civic clubs of all kinds. Notwithstanding the continuous circulars, letters, and orders of this department, only 355 civic clubs had been organized. The Woman's Club of Manila was very helpful to the campaign in stimulating the interest of the women in home gardening especially. As a result of their efforts there were something like 300 women's clubs organized in the different municipalities. A home-garden contest was announced in July of 1918 to create greater interest in home gardening. The prizes offered were ₱1,000 for the Province winning first place; ₱500 for the Province winning second place; ₱500 for the municipality, township, or municipal district winning first place in the Province; and ₱250 for the municipality, township, or municipal district winning second place. The total number of gardens qualifying for the contest, or those having an area of at least 50 square meters and maintained up to the end of the year, was 315,114 at the close of the contest, or on December 31, 1918. Laying aside altogether all considerations of the beneficial influence that such a civic movement as a home-garden campaign exerts upon the people, the 315,114 gardens reported were easily worth to the people owning them ₱630,228, placing the total products of a home garden of the area mentioned at the very low estimate of ₱2 per garden.

Poultry-swine stations.—There are now 16 poultry-swine stations established in as many Provinces. These stations were designed as models of a one-man poultry-swine farm. The principal aims are: To increase the number of pigs and chickens of improved stock for distribution, principally within the Province where the station is located; to demonstrate the management of a poultry-swine farm; and, finally, to show that a one-man poultry-swine farm can be operated profitably. At the end of the year there were 16 boars of the Berkshire breed; 27 sows, most of which are pure-blooded Berkshires, the others being of mixed or native blood; 582 hens, mostly Cantonese; 104 roosters, nearly all of the same breed; and 55 Indian runner ducks at the 16 stations. Since their establishment, or in less than a year, 1,328 animals have been added to the original stocks, which means a natural increase of 259 per cent. The number of deaths was 90, and this represents only 7.1 per cent of the total number of births. Some of the stations first established now have cockerels, pullets, and pigs for sale, and where there money available for the establishment of other stations in the other Provinces and a guarantee that, once established, they could be maintained for a reasonable period of time, new stations could be opened up with the excess stock from some of those now running.

In addition to the stations established and maintained by the department, insular aid of ₱500 to each was granted to 18 farm schools and ₱1,000 to one to enable these farm schools to enlarge the scope of their poultry projects. These schools reported a total flock of 14,063 at the end of December, 1918. Three thousand seven hundred and four chicks were raised from June to October, 1918, and 19,564 eggs were laid during the same period. The number of eggs distributed was 4,074 and the number of chickens 13,072.

Miscellaneous activities.—Large quantities of garden and field-crop seeds were distributed to farmers through provincial representatives both of the department and of the bureau of agriculture.

A loan of ₱10,000 was made to the Province of Nueva Ecija to help the homesteaders around the Central Luzon Agricultural School at Munoz. Small loans were made to these homesteaders for the purchase of work animals and farm implements principally.

Experience has shown that small loans made available at the proper time can accomplish much in the way of enabling the farmers to enlarge their farm operations.

Demonstrations by a food expert were made to the public of Manila to show what can be done in the line of food conservation. A food expert of the name of A. F. Spawn was engaged by the department for two weeks to carry on practical demonstrations. The manufacture of sweet potato flour and of

banana "coffee" brought out clearly the great possibilities of these tropical products.

STOCK FARMS UNDER ACT 2758.

By operation of Act 2758 all cattle in the Alabang stock farm, consisting of 280 head of cattle and buffaloes formerly belonging to the bureau of agriculture were transferred to this department. This cattle, together with those imported from India on April 26, 1918, constitute the present stock to be distributed among the stock farms which will be established by this department under said act. There have already been established with full equipment for operation two stock farms—one in Bongabon, Nueva Ecija, and the other in Ubay, Bohol. Both these farms have been supplied with sufficient number of cattle to start with.

There has also been undertaken during the year the selection of sites for the establishment of other stock farms—one in the Punto Mairara, Ilocos Norte, and one in Pagsanjan, Laguna.

Some of the animals imported from India have been sold to private persons. Only suitable number has been reserved for stock farms. The following statement shows the number and kinds of animals purchased from India, through E. A. Gardiner, of Singapore, in accordance with contract executed by and between the latter on April 26, 1918:

Nellore or ongale	541
Nellore or ongale, female, with calves	5
Indian buffaloes	65
Indian buffaloes, female, with calves	2
Multani	22
Multani, female, with calves	2

Total ----- 637

Aside from the Nellore cattle there were also imported 26 head of Multani breed. This breed has been imported on account of its ability to give milk. Of 637 head of cattle above mentioned 10 died during the trip and 213 were landed at the Department of Mindanao and Sulu for the use thereof. The price and expenditure of 627 head of cattle, as per contract, amounted to ₱146,865 less the amount of ₱48,420 paid by the Department of Mindanao and Sulu for the 212 head assigned to that department.

Up to December 31, 1918, there have been sold to private persons 54 head of cattle, as follows:

- 39 nellore or ongale, at ₱260.
- 6 Multani, at ₱300
- 9 Indian buffaloes, at ₱325.

On November 7, 1918, 51 head of cattle were purchased from Mr. W. J. Mathews, of Manila, at ₱75, and added to the herd.

The cattle in the stock farms of Bongabon, Nueva Ecija, and Ubay, Bohol, are in fine shape. Up to December 31, 1918, 37 births of young calves were reported against 94 deaths, on account of debility due to the poor pasturage at the farm during the dry spell. It is expected that improvement toward cutting the rate of mortality will be obtained in the future. In the Bongabon stock farm there are 371 head of cattle, including buffaloes, and in the Bohol stock farm there are 59 Indian cattle and buffaloes plus 100 head of native cows, which were purchased in Bohol by direction of this department.

One hundred and eighty-four head of Indian cattle and buffaloes in poor condition were sent to Alabang stock farm and nearly all have now recuperated.

To meet the purposes of Act 2758 other stations will be established during the coming year in the northern and southern parts of Luzon. The animals now at Alabang will be sent to these stations as soon as corrals and buildings are completed. Promising sites for stock farms in the Provinces of Laguna and Ilocos Norte, respectively, have been inspected.

No activity may be reported as yet, in view of the fact that the stations established under Act 2758 have just begun operation, except the few sales of animals which have been made during the year and of which mention has been made above.

Respectfully submitted.

G. APACIBLE,
Secretary of Agriculture and Natural Resources.

To his excellency the GOVERNOR GENERAL, Manila:

SECOND ANNUAL REPORT OF THE DEPARTMENT OF COMMERCE AND COMMUNICATIONS.

JANUARY 1 TO DECEMBER 31, 1918.

INTRODUCTORY REMARKS.

SIR: Pursuant to the provisions of section 91 of the Revised Administrative Code, I have the honor to submit the following annual report of the department of commerce and communications for the fiscal year ending December 31, 1918. On July 22, 1918, Mr. Catalino Lavadfa, the first to occupy the position of under-secretary of this department, resigned, and the present incumbent was on July 23, 1918, appointed to succeed him. On February 23 of this year Secretary Jakosalem left for the United States as a member of the independence mission and the undersigned has since then been acting in his place.

GENERAL STATEMENT OF POLICY.

Since the organization of this department it has always been its policy to give its bureaus as much liberty of action in the prosecution of their respective activities as they can consistently do without curtailing the executive control and supervision which this office must exercise over them. This policy is adopted in order to allow the bureaus the proper initiative and the use of a sound discretion in all matters conducive to the betterment of their service.

With respect to its relations with the other departments of the Government, suffice it to say that this office has always been ready and willing to render full and earnest cooperation in the realization of any plan, or the inauguration of any policy, or the development of any enterprise which, in the opinion of its functionaries, will best subserve the interests of the people and the country.

With these few remarks we will proceed to give a general survey of the most important phases of the different activities carried on during the last fiscal year by the six bureaus under the department of commerce and communications.

BUREAU OF PUBLIC WORKS.

PERSONNEL.

Of all the bureaus of the Government, this bureau has undoubtedly suffered the heaviest in the loss of technical personnel on account of the European war. It had 11 American designing engineers, and it temporarily lost 10 of them, joining the Philippine National Guard and the Officers' Reserve Corps of the United States Army. It had 29 American district engineers, and it temporarily lost the service of 13 of them. It lost temporarily 4 Filipino engineers, who enlisted in the National Guard. It is also during the period covered by this report that the bureau was successively left by its two former directors, Mr. E. J. Westerhouse and Mr. Claud Russell.

In the 45 Provinces of the islands there are 12 American and 29 Filipino district engineers. On the Island of Luzon there are 4 American and 19 Filipino district engineers. In the Visayas there are 3 American and 7 Filipino district engineers, and in Mindanao and Sulu there are 5 American and 3 Filipino district engineers.

The total number of technical employees as of December 31, 1918, is 125, 37 of whom are Americans and 88 are Filipinos, as compared with 43 Americans and 79 Filipinos in 1917, 63 Americans and 35 Filipinos in 1915, and 81 Americans and 24 Filipinos in 1914.

PUBLIC WORKS APPROPRIATIONS.

The work of the bureau materially increases every year. This is clearly shown by the fact that the public works appropriations for the present fiscal year reached the grand sum of ₱18,731,000, which is ₱7,533,100 more than that of 1918, and exceeds that of 1917 by the wide margin of ₱13,750,930. This is the reason why the bureau is continually in need of, and must necessarily be supplied with, technical men experienced in the lines of construction and design.

ACTIVITIES OF THE BUREAU.

Roads.

The extension of the first-class road system is being continued in all Provinces, and in several instances considerable additional first-class road was declared, noticeably in the Provinces of Bohol, Occidental Negros, Pampanga, and Pangasinan.

The policy of adopting a systematic construction program, based on the transportation requirements and financial ability of each individual Province, is now beginning to bear fruit, especially in Cebu, Pangasinan, Pampanga, and Batangas. Hand in hand with this plan goes the steady consolidation of the various provincial road systems into a connected whole by means of interprovincial and intercoastal roads. Interprovincial roads are now under construction joining Iloilo and Antique, Pampanga and Bataan, Laguna and Tayabas, Tayabas and Batangas, Pampanga and Tarlac, Ilocos Norte and Cagayan, Neuva Ecija and Nueva Vizcaya, Albay and Sorsogon, Antique and Capiz. The survey of an interprovincial road between Bataan and Zambales has also been begun and a location determined for the important intercoastal Baybay-Abuyog Road in Leyte, on which construction is well under way. Much progress was likewise made on the extension of the Cagayan Valley trunk road in Neuva Vizcaya, Isabela, and Cagayan. Grading on the Naga-Pasacao Road in Ambos Camarines reached the town of San Fernando and extensive trail work was undertaken in the Mountain Provinces and the Department of Mindanao and Sulu.

All the projects above mentioned are expected to be completed in due time and are calculated to help much in the economic development of the Provinces concerned.

Below are given comparative data of the road work in the Philippine Islands for the years 1917 and 1918.

Length of roads in existence.

	Dec. 31, 1918.	Dec. 31, 1917.
	<i>Kilometers.</i>	<i>Kilometers.</i>
First class.....	4,090.2	3,735.7
Second class.....	2,015.8	2,056.6
Third class.....	3,123.7	3,393.6
Total.....	9,234.7	9,185.9

Average number of kilometers maintained.

	1918	1917
Camino system.....	4,023.4	3,616.1
Gang system.....	2,773.5	3,057.0
Total.....	6,796.9	6,673.1

Total cost of road maintenance.

	1918	1917
Camino system.....	₱2,756,810.70	₱2,143,337.68
Gang system.....	539,450.32	560,238.63
Total.....	3,346,261.02	2,704,146.00

Average cost of maintenance per kilometer per year.

	1918	1917
Caminero system.....	P685.19	P592.87
Gang system.....	212.53	183.27

BRIDGES.

While bridge construction has been somewhat curtailed during the past year owing to the lack of material in the local market, it has been possible, nevertheless, to erect several important structures.

The Santiago River Bridge on the Manila-Tarlac Road, between the municipalities of Concepcion and Magalang, was practically finished at the end of the year. This structure closes the last important bridge gap in the through highway route between Manila and Tarlac. The Navotas Bridge of the standard slab and girder concrete type has been completed, and so was the steel bridge in Camiling, Tarlac, opened to traffic early in the year. At Imbang River, on the Silay-Guinabalaon Road, Occidental Negros, another bridge which is a notable example of the so-called overflow type was also completed.

A reference to the records of previous years will show that the total number of durable bridges and culverts in existence was 6,206 for 1914, 6,640 for 1915, 7,156 for 1916, 7,370 for 1917, and 7,428 for 1918.

The total number of reinforced concrete structures in existence was 3,247 in 1914, 3,690 in 1915, 3,973 in 1916, 4,138 in 1917, and 4,233 in 1918.

The appropriations made by the legislature for road and bridge funds for 1918 were the same as those for 1917, namely, ₱3,000,000 (Act No. 2736 and Act No. 2704). These appropriations were for regularly organized Provinces alone and did not include the road and bridge funds collected by the Provinces from cedula tax, land tax, and their participation in the internal-revenue taxes. In this connection it must be stated that a large amount of road work during the last year was done with purely provincial funds, and in some cases municipalities have had street construction and maintenance done by the district engineer, noticeably in Pampanga, Laguna, Tayabas, and Iloilo.

PORT WORKS.

The port works activities of the bureau during 1918 were confined to the construction of projects already under way and the study of various future developments. Work along this line is now in full progress on piers Nos. 3 and 5, Manila; in the reclamation dock area of Cebu, Cebu; in Tacloban, Leyte; in Iloilo, Iloilo; in Catbalogan, Samar; and in Catarman, Samar. At Tagbilaran, Bohol, the channel through the outer reef was completed and the port is now open to interisland steamers of large size. At Aparri, Cagayan, the improvement of the port was continued and a channel dredged permitting ships to enter the river without difficulty. In Mindanao and Sulu wharf construction was carried on at Overton, Davao, and Jolo, and the new structure at Zamboanga begun in 1916 was completed. At Dumaguete, Oriental Negros, the rock-fill breakwater for the port in that place was advertised for bids, but no tenders were received. However, with the additional funds that will be made available for this project during the present year, it will be possible to offer a more attractive proposition to contractors and to proceed with the successful termination of the work.

In the matter of port construction and improvement in the islands we must again reiterate what we have always advocated in the past, namely, that the Government equipment for port works should be continually increased and a more ambitious program outlined for the years immediately to come. The wisdom and desirability of such a plan is especially apparent now when economic awakening is taking place throughout the world. The afterwar times are bound to be replete with industrial and commercial activities of every kind, and if the Philippines is to reap her full share in these matters, she must be provided with as many excellent ports as can possibly be built so as to attract foreign commerce to these shores. Great progress along this line has been made in the past, but the increase in production has been larger, and the demand for dock facilities by the producing centers and by the interisland freight-

ers is constantly growing. Due to the geographical formation of the Philippines, marine transportation will always be her most important means of communication, and it is also for this reason why she is expected in time to be the greatest trade center of the Orient when provided with proper facilities.

DREDGING.

The record shows that the great amounts of dredging work accomplished during 1918 were done on the outer bar, 226,230 cubic meters; outer harbor, 215,617 cubic meters; lower Pasig River, 95,869 cubic meters; Iloilo River, 67,325 cubic meters; Vitas Estero, 55,323 cubic meters; and several other minor dredging, making a sum total of 815,343 cubic meters of dredging work done.

The dredge equipment of the bureau was in fair condition only at the beginning of the year, and numerous breakdowns have reduced the dredging accomplished during the past 12 months. The acquisition of the dredge *America* and its reconstruction will add materially to this class of equipment, but if the increasing demands of foreign and domestic shipping are to be met the acquisition of new dredges and scow equipment is necessary unless the present equipment is thoroughly overhauled.

BUILDINGS.

The first product and the best example of the new policy adopted by the Government in the architectural design of public buildings is the Pangasinan capitol at Lingayen, which was inaugurated in February of this year. This structure, ornamented as it is with magnificent artistic effects, presents a striking contrast to the standard Government building of the past, devoid of all kinds of embellishments, which is now being abandoned to give way to a more picturesque and attractive style of architecture.

The Pangasinan capitol building is 55 meters long by 18.4 meters wide, and is surrounded by a wide, concrete terrace with a massive concrete balustrade. An idea of the magnitude of the work entailed in this edifice may be gained from the fact that over 8,000 barrels of cement, nearly 1,100,000 kilograms of reinforced steel, and approximately 50,000 cubic meters of crushed stone were used in the concrete work, while of the total of ₱370,000 expended in its construction, the labor cost was ₱108,000. The design of this building called for the utmost care in construction, but the results obtained compare very favorably with the best work of its kind in foreign countries.

The construction of capitol buildings at Laoag, Ilocos Norte, and Tacloban, Leyte, was continued during the year. These buildings, while not so pretentious as the Pangasinan capitol, call for similar care in their construction, and the use of special ornamental features. At Zamboanga a normal school building and an additional wing for the hospital were under construction at the end of the year.

The usual school and market building work was executed, the record showing that 27 schools and 19 markets were completed in 1918 as against 32 schools and 15 markets completed in 1917.

In general, building construction was seriously handicapped throughout the year because of the lack of materials and transportation facilities.

WATERWORKS CONSTRUCTIONS.

The activity of the bureau along this line was greatly hampered by restrictions on the shipment of pipe and fittings from the United States on account of the war. Work was started on the Barili system for the town of that name in Cebu, and was about 70 per cent completed at the close of the year. In Batangas the installation of a water-supply system, using artesian wells as a source of supply, was completed, with the exception of the installation of the pumping machinery, which has been under order for some time from the United States. At the municipalities of San Jose, Antique, and Pagsanjan, Laguna, the construction of waterworks systems has been begun and was well under way at the close of the last year. In Tagbilaran, Bohol, the system, which has been in successful operation for some time, was extended to supply water to Dauis, and preliminary construction for the combined waterworks systems for Tayabas and Lucena has already been started, the necessary materials for this project having arrived from the United States.

late last year. In Jolo, Sulu, the water-supply system was completed in October, 1918, and the spring flow of 1,500,000 gallons per day is believed to be sufficient for the future growth of the city.

In the construction of artesian wells an unusual success has been attained in 1918, as shown by the fact that 165 of them were successfully driven during this year, compared with 108 in 1917. The nearest approach to the number of successful wells drilled during the year just ended were those of 1915, which were 18.7 per cent less than for 1918. Compared to the successful results of 1917 the accomplishment of 1918 is an increase of 52.8 per cent. The wells completed during this year furnish potable water to a population of approximately 230,000.

IRRIGATION WORKS.

The irrigation activities of the bureau of public works during the past year have been confined largely to the maintenance of irrigation systems constructed by the Government, the repair and improvement of irrigation systems in the friar lands estates, and the surveys and preliminary field investigations of new irrigation projects. Very little has so far been done along this line on account of the difficulty of securing the necessary personnel, considering that irrigation is a highly specialized branch of engineering and requires the best trained and most experienced men. It is to be regretted that such a condition obtains, especially when a shortage of food production is being felt in the Philippines at the present time. However, it is confidently expected that the establishment of irrigation systems throughout the islands will soon be undertaken with vigor as the demand for them becomes more and more urgent every day. No effort is being spared to accomplish this end. The organization of the irrigation personnel has been in progress since last year; the hydrographic investigations and topographic surveys are now in progress for the irrigation projects in San Jose, Nueva Ecija; Laoag-Vintar, Ilocos Norte; Botolan, Zambales; Naic, Cavite; San Mateo, Rizal; Bulo River, Bulacan; Pansol Creek and Talisay River, Bataan; Nyom River, Provinces of Zambales and Pangasinan; Sierra Bullones River, Bohol; and Bued River, Provinces of Pangasinan and La Union.

THE OPERATION AND REGISTRATION OF MOTOR VEHICLES.

The number of motor vehicles registered during the year was 1,301 new registration, and 6,078 reregistration, making a total registration of 7,379, as against 6,024 of last year. Of this total, 1,143 motorcycles and other motor vehicles having less than four wheels are included.

In the licensing of operators 35,000 applicants were examined and 3,259 new licenses issued. Including renewals, 8,150 drivers were licensed to operate motor vehicles.

BUREAU OF POSTS.

ORGANIZATION AND PERSONNEL.

The progress made by this bureau in the preceding years continued during the period covered by this report. At the close of 1918, there were in operation 828 post offices, 319 money-order offices, 394 postal savings banks, 315 telegraph offices, and 10 radio stations; a gain over the previous year of 10 post offices, 1 money-order office, and 6 postal savings banks. The records of the different divisions show that the net earnings of the bureau for 1918 amounted to ₱722,417.58, as against ₱170,335.11 for 1917, or an increase of ₱552,082.47, thus making the bureau of posts not only self-supporting but also a source of revenue to the Philippine Government.

The personnel of the bureau as of December 31, 1918, was composed of 65 Americans and 3,053 Filipinos, as compared with 81 Americans and 2,872 Filipinos in 1917, 99 Americans and 2,812 Filipinos in 1916, 109 Americans and 2,532 Filipinos in 1915, 122 Americans and 2,515 Filipinos in 1914, and 187 Americans and 2,343 Filipinos in 1913. During the year there was a decrease of 16 in the American personnel and an increase of 181 in the Filipino personnel.

Since September 16, 1918, Mr. José Topacio, the assistant director, has been acting director of the bureau, due to the assignment to the censorship office and vacation leave of Mr. R. M. Shearer, the director.

ACTIVITIES OF THE BUREAU.

POSTAL OPERATIONS.

During the year 10 new post offices were established and at present there are but 37 of the 817 municipalities in the Philippines without post offices. Eighteen of these 37 municipalities without post offices are very new, having been created only at the beginning of the year 1918. Free-delivery service is now in operation in 462 municipalities, and at the end of the year there were in operation 435 mail routes, an increase over the previous year of 9 mail routes. Mail was carried over 2,096,662.78 kilometers, as compared with 2,045,088 kilometers in 1917, an increase of 51,573.81 kilometers, or 2.57 per cent.

FOREIGN PARCEL POSTS CONVENTIONS.

During the year a parcel post convention was concluded between the Government of the Philippine Islands and North Borneo, and a parcel post convention was concluded between the United States and the Portuguese Colonies of Macao and Timor, in which the Philippines has the privilege of participating. Parcel post convention is now pending between the Philippine Islands and Japan.

In 1918, 18,680 parcels were sent to foreign countries, an increase of 261 per cent over the previous year. The total number of parcels received from foreign countries was 13,090, an increase of 55 per cent.

MONEY-ORDER SERVICE.

The total number of orders issued during the year was 462,825, an increase of 13,988, or 3.1 per cent, amounting to ₱31,469,065.26, an increase of ₱6,227,040.36, or 24.6 per cent over 1917. The fees on these orders amounted to ₱144,142.12, an increase of ₱12,487.40, or 9.4 per cent.

The total amount of money orders sent out of the Philippine Islands by means of the money-order service was ₱2,032,848.28, a decrease of ₱722,042.10, or 26.2 per cent. The amount of the United States and foreign orders paid in the Philippine Islands was only ₱867,012.12, thus leaving a balance against us of ₱1,165,836.16.

POSTAL SAVINGS BANKS.

The total deposits amount to ₱5,799,592.05, which represent 78,124 depositors and shows an increase of 9,264 depositors and ₱873,362.16 in deposits. The net earnings for the year were ₱62,239.01. This is the first time in the history of the postal savings bank that its operations rendered profit. The net deficit on December 31, 1917, was ₱67,971.91. This development is of great significance, showing, as it does, that the inhabitants of the Philippines are fast acquiring the habit of saving, which is the very object intended to be encouraged by the postal savings banks.

TELEGRAPHIC OPERATIONS.

The 315 telegraph offices and 10 wireless stations which are in operation have a total of 9,123.74 kilometers of land lines and 1,405.63 kilometers of cables, an increase over the previous year of 313.83 kilometers of the former and a decrease of 181.74 kilometers of the latter, which decrease was due to the substitution of land lines for cables.

There were 1,233,280 telegraph messages handled in 1918 as compared with 913,615 for 1917, an increase of 319,765 messages, or 35 per cent, and a corresponding increase in the receipts of ₱331,531.16, or 39.6 per cent. The total receipts were ₱1,167,600.62 and the total expenditures were ₱795,727.81, leaving a net profit of ₱371,872.81.

PROJECTS UNDER CONSIDERATION.

It is to be regretted that at present the quarters for post offices in Provinces have to be rented. This is not only financially disadvantageous to the Government but in many cases it impairs the efficiency of the service. To remedy this situation there should be appropriated every year adequate sums to build post-office buildings in the capitals of the Provinces, especially in Cebu, Iloilo, Zamboanga, Vigan, Albay, Tacloban, and Lingayen.

The program for the construction of radio stations in all important ports of the Philippines and in every populated island should also be continued with greater vigor. The rapid commercial development of the Philippines demands the establishment of these means of communication.

Another project which is being seriously studied by this bureau is the use of aeroplanes as a means of transporting mail matter. It is reported by several countries of Europe and the United States which already have organized aerial postal services that the same are rendering satisfactory results. All the necessary data are therefore now being gathered looking to the adoption of this system in the Philippines.

BUREAU OF COMMERCE AND INDUSTRY.

ORGANIZATION AND PERSONNEL.

On January 31, 1918, the Philippine Legislature passed Act No. 2728, "An act creating the bureau of commerce and industry, defining its functions, making appropriations therefor, and for other purposes." On February 19 of the same year the senate confirmed the appointment of Mr. James J. Rafferty, then collector of internal revenue, and of Mr. Fidel A. Reyes, as director and assistant director, respectively, of the new bureau, and shortly thereafter steps were taken toward the organization of the same.

The personnel of the bureau of commerce and industry as of December 31, 1918, totals 1,589, 12 of which are Americans, 35 foreigners, and the rest Filipinos.

ACTIVITIES OF THE BUREAU.

The organization of Philippine commercial agencies in foreign countries.

One of the first actions taken by the secretary of commerce and communications for the successful prosecution of the functions intrusted to the bureau of commerce and industry was to recommend the sending of Director Rafferty to the United States for the purpose of making a thorough survey of the commercial field therein in the interest of Philippine trade. Accordingly, on August 28, 1918, Director Rafferty was authorized by his excellency the Governor General to proceed to the United States on a tour of duty to carry out the instructions issued to him by Mr. Dionisio Jakosalem, secretary of commerce and communications, which are embodied in the following abstract of his letter of August 8, 1918:

* * * * *

"Preliminary to the organization of the Philippine commercial agencies in foreign countries for the proper promotion of the Philippine foreign trade, it now becomes necessary to proceed with the collection of materials of commercial character abroad in the interest of the business of the Philippines and for the proper prosecution of the activities of the bureau of commerce and industry.

"With the above consideration in view, the first country, of course, which strikes the preferential attention of this department is the United States, where an agent of the Philippine Government, with all the necessary instructions based upon the commercial data actually on hand, should be sent. It is considered wise, however, that before appointing any foreign agent an official of the bureau of commerce and industry be sent to the United States for the purpose of making a thorough survey of the commercial fields therein, and upon the result thereof to recommend to the Philippine Government the best plan by which the bureau of commerce and industry could carry out properly its legal functions in the interest of the Philippine trade in foreign countries."

Mr. Rafferty's report on the result of his investigation will be given due publicity upon his return to the Philippines.

THE RICE PROBLEM.

An important work which this bureau was called upon to undertake during the year was the handling of rice to put down the so-called rice crisis of 1918. By virtue of Executive Order No. 36, issued on October 7, 1918, which suspended the customs duties on rice imported into the Philippine Islands for the remainder of 1918, the bulk of the work in carrying out the provisions of

said order fell on the bureau of commerce and industry. Pursuant to the provisions of this order, the bureau formulated the necessary instructions and regulations as approved by the department for the fixing of the price and distribution of the rice imported into the Philippines free of duty.

The total amount of rice admitted free of duty up to December 31, 1918, by virtue of this executive order, which ceased to be enforced since that date, was as follows:

	Kilos.
Manila-----	12, 661, 289
Cebu-----	21, 058, 722
Iloilo-----	1, 713, 675
	<hr/> 35, 433, 686

The average maximum prices fixed by the government were:

	Per sack of 56½ kilos.
Manila-----	₱10. 10
Cebu-----	9. 65
Iloilo-----	10. 29

On Saigon rice imported free of duties an average price f. o. b. Saigon of ₱7.17, at an average rate of exchange of 166, was paid per picul of 60.7 kilos. The average freight paid was ₱2.38, and the average miscellaneous expense was ₱0.65, making an average total cost per picul of ₱10.20 in the Philippine market.

WORK OF THE DIFFERENT DIVISIONS OF THE BUREAU.

DIVISION OF VESSELS AND LIGHTHOUSES.

This division is in charge of the following vessels, which were transferred from the bureau of customs: The cable ship *Bustamante*, the cutters *Basilan*, *Corregidor*, *Gilbert*, *Negros*, *Polillo*, and the launches *Ranger*, *Jolo*, *Ethel*, *Ilocano*, *Rizal*, *Moro*, *Harbor No. 3*, and *Viola*.

The cable ship *Bustamante* maintains the submarine cables throughout the islands, and in addition thereto made a voyage for rice for the Province of Iloilo and two voyages to Balikpapan for crude oil. The cutters, besides being used for lighthouse inspectors and other official assignments, have been very instrumental in relieving the shortage of interisland tonnage, which was keenly felt during the year and which resulted in a scarcity of rice in several isolated places of the archipelago. The launches are used in the transportation to and from Engineer Island of laborers and supplies.

THE EX-GERMAN VESSELS.

These were the *Nipsic*, *Quantico*, *Laensamud*, *Quinnebaug*, *Iosco*, *Yezoo*, *Raritan*, and the *Midget*. They were chartered to the Philippine government by the United States Shipping Board and were for some time operated by the bureau of commerce and industry. Early in 1918 the insular government decided to subcharter six of the above-named ships and bids for them were duly advertised. Madrigal & Co., the highest bidders, were awarded the ships, and a charter party to this effect was entered into on April 1, 1918, between said company and the government of the Philippine Islands on the vessels *Laensamud*, *Quinnebaug*, *Iosco*, *Yazoo*, and *Raritan*. The *Quantico*, by order of the Shipping Board, was transferred to Robert Dollar & Co., by whom it was operated until it was totally wrecked off Tablas Island by the typhoon of December 25, 1918. As to the *Nipsic* and the *Midget*, they are still being operated by this bureau.

On February 26 and upon request of the charterer, the charter contract with Madrigal & Co. for the five vessels above mentioned was canceled, and they were again offered for charter. On February 28 Fernandez Hermanos were awarded the contract for the said vessels, excepting the *Laensamud*, which the department secretaries, acting jointly, finally decided should be operated by this department through the bureau of commerce and industry, in view of the fact that the bids received to charter the same do not conform with the conditions required by the government.

MARINE RAILWAY AND REPAIR SHOPS.

Transferred from the bureau of customs on March 16, 1918, these shops are now a part of the bureau of commerce and industry. Work is performed for all branches of the government and, with the approval of this department, for private parties, on a basis of cost, plus a surcharge of 10 per cent and a percentage for nonproductive labor, etc. The plant is thereby self-supporting. The net income for the last year amounted to ₱70,259.80. Save the United States navy yards, Olongapo and Cavite, Engineer Island is the best-equipped shipyard in the Philippines. Here is done all shipbuilding and repair work of the insular and provincial governments. The lighthouse shop performs all lighthouse repair work and fabricates lighthouse apparatus for the smaller order of lights.

The shops have given employment to hundreds of laborers and the number on the pay roll on December 31, 1918, was 741.

REGISTRATION OF CORPORATIONS AND OTHER BUSINESS ENTERPRISES.

The functions and duties heretofore performed by the division of archives, patents, copyrights, trade-marks, and corporations of the Philippine Library and Museum with reference to the registration of corporations, etc., were transferred to the bureau of commerce and industry by virtue of Act No. 2728 creating said bureau. From April 16, 1918, the date the bureau assumed charge of said work, to December 31, 1918, the records show that six licenses were issued to foreign corporations; 177 articles of incorporation of stock corporations and 45 articles of nonstock corporations were filed, making a total collection of ₱23,184, including the fees paid for the filing of 34 certificates of increase of capital stock, 17 amended articles of incorporation, 221 by-laws of corporations, and the issuing of 231 certified copies of miscellaneous documents. In this section were also filed 116 articles of incorporation of rural credit associations and by-laws—exempt from payment of fees.

The amount collected by the Philippine Library and Museum from January 1, 1918, to April 15, 1918, was ₱5,342, making the total fees for 1918 ₱28,526, as against ₱13,984, the amount of collections for 1917, an increase of over 100 per cent. Several reasons may be attributed to this increase. Commercial and industrial activity was greater in 1918 than in any other previous year. New enterprises were formed, most of which took the form of corporate organizations. This is shown by the fact that about 30 new oil corporations were organized aside from the old companies which raised their capital stock during the year.

As to the registration of partnerships, the records show that during the period commencing May 13, 1918, the date of transfer to this bureau, and ending December 31, 1918, there were registered 103 articles of copartnership giving a collection of ₱4,018.50. Including the fees charged for other miscellaneous commercial documents, a total of ₱4,455 was realized.

The patents and trade-marks section shows that during the period commencing April 16, 1918, the date of transfer to this bureau, and ending December 31, 1918, there were registered 220 trade-marks, which paid a fee of ₱50 each. Including the charges made for the filing and recording of other documents having to do with patents and trade-marks, the total collection during the year amounted to ₱11,335.

In conjunction with the legal division, there are the statistics division, the industrial organizations division, the markets and exchanges division, the commercial research division, and the commercial intelligence division. The nomenclature of these different divisions indicates their respective functions. The industrial organizations division and the markets and exchanges division are still unorganized, but their complete formation is being rapidly accomplished.

RÉSUMÉ OF PHILIPPINE TRADE AND INDUSTRY DURING THE YEAR.

The total foreign trade of the Philippine Islands reached the sum of ₱468,563,494 in 1918 as compared with ₱322,802,674 in 1917, which is an increase of ₱145,760,820, or 45.1 per cent. The exports alone amounted to ₱271,365,071, compared with ₱191,208,613 in 1917, which is an increase of ₱80,156,458, or 41 per cent, while the imports reached ₱197,198,423, against ₱131,594,081 in 1917, which is an increase of ₱65,604,362, or 50 per cent.

As shown from the foregoing, the foreign trade of the Philippines has decidedly taken a change for the better. A wave of prosperity is perceptible throughout the islands, and Filipino capital is now being invested in every line of business enterprise, as evidenced by the fact that during the year there were registered 72 industrial domestic corporations, with a paid capital of ₱10,008,060.50 as compared with 21 in 1917 with a paid capital of ₱2,557,005.90. In conjunction with these corporations, it is confidently believed that the creation of such governmental enterprises as the National Development Co., the National Coal Co., the National Iron Co., and the National Cement Co., recently authorized by the legislature, much will be accomplished in the exploitation of our natural resources and the development of our industrial activities.

BUREAU OF SUPPLY.

ORGANIZATION AND PERSONNEL.

Slight modifications have been made during the year in the office organization of this bureau. As its organization now stands, the bureau of supply proper is made up of an executive division, a buying division, a division of supplies, and an accounting division. The ice plant, while under this bureau, is a sort of an independent entity.

The civil-service classified personnel on January 1, 1918, consisted of 14 Americans and 84 Filipinos. Forty-nine appointments were made during the year, the number of separations for the same period being 40 in all, and are classified as follows: Resignation, 5 Americans and 19 Filipinos; transfer, 10 Filipinos; and retirement, 6 Americans. On December 31, 1918, the staff, therefore, was made up of 3 Americans and 104 Filipinos as compared with 14 Americans and 84 Filipinos in 1917, 17 Americans and 81 Filipinos in 1916, 21 Americans and 79 Filipinos in 1915, 26 Americans and 80 Filipinos in 1914, 34 Americans and 83 Filipinos in 1913.

On January 9, 1918, Mr. Charles H. Magee, the purchasing agent, was granted an extended leave of absence to June 7, 1919, and since January 10, 1918, Mr. Cipriano E. Unson, the assistant purchasing agent, has been in charge of the bureau as acting purchasing agent.

OPERATIONS OF THE BUREAU.

Purchase and sale.

In spite of the decidedly unfavorable conditions that prevailed, the year 1918 broke the record heretofore established in the volume of work done. Combined purchases and sales amounted to ₱25,506,217.63, or an increase of ₱6,595,327.15 over 1917. Purchases which aggregated ₱12,663,502.68 exceeded the previous year by ₱3,385,755.22, or 36.498 per cent. Of this total, ₱9,744,748.50, or 76.95 per cent, were local, or made through Manila merchants; ₱2,718,916.28, or 21.47 per cent, from the United States; and ₱199,837.90, or 1.58 per cent, from foreign countries.

Requisitions and orders.

An average of nearly 1,250 requisitions per month was received, the actual total for the year being 14,994, 109 more than in 1917, of which 7,517 were from insular bureaus and offices and 7,477 from provinces and municipalities; 137,036.482 metric tons of cargo—41,267.496 received and 95,768.986 shipped—were handled, covered by 17,062 bills of lading; 3,985,336 board feet of lumber were received and 4,220,270 were issued; sales vouchers aggregated 35,413; 1,120 orders were placed through the purchasing agent at New York, containing approximately 63,000 items; 17,062 bills of lading and about 38,000 bills were checked, indexed, and passed for payment; 24,000 vouchers were prepared and certified for payment.

Collections and disbursements.

Collections and disbursements amounted to ₱10,607,844.13 and ₱13,691,915.58, or an increase of ₱2,081,065.23 and ₱4,635,962.58, respectively; 3,595 official receipts were issued, while the number of warrants drawn aggregated 12,860; 84,999 serial receipts and 42,461 issue slips were given out. The total number of entries required by the business transacted is estimated at over 8,000,000.

Earnings.

The gross earnings, exclusive of the division of cold storage, amounted to ₱900,703.18 against ₱547,541.83 for 1917, or an increase of 64.49 per cent. The net receipts, with the operating expenses and the cost of office furniture and equipment purchased deducted, were ₱512,623.70. This is ₱278,661.15 more than in 1917, or an increase of 119 per cent. The percentage of operating expenses to cost value of sales was only 3.135 per cent, as compared with 3.376 per cent, the percentage for the previous year, until then the lowest.

The great amount of work required of and accomplished by the bureau of supply, as shown in the foregoing data, was the natural result of the increasing activities of the different branches of the Government and the creation of new governmental entities. Necessarily the work of this bureau must increase as the needs of the Government increase.

THE ICE PLANT.

The gradual reconstruction work of the main building, begun in 1911, so as to convert it into a modern concrete structure throughout, is now practically completed, the total cost to date being ₱799,693.32.

The gross earnings aggregated ₱575,921.84, ₱86,013.05 more than in 1917, while the expenses, including ₱36,203.24 for building reconstruction and ₱6,810.27 for purchase of equipment, amounted to ₱435,413.64, or ₱15,751.62 more than the year previous. The net gain was, therefore, ₱140,508.20. This represents an increase of ₱70,261.43 over 1917.

BUREAU OF LABOR.**ORGANIZATION AND PERSONNEL.**

Due to the establishment of new employment agencies and to the transfer to this bureau of the migration office of Cebu, which until the end of the year 1917 was under the control of the Government of the Department of Mindanao and Sulu, it was found necessary to create what is now called the division of provincial employment agencies. Consequent upon this change and the increasing work of the bureau, the number of personnel was correspondingly enlarged from 55 in 1917 to 99 in 1918. The personnel is entirely Filipino.

ACTIVITIES OF THE BUREAU.*Employment agencies.*

Employment agencies are now established in Manila, Cebu, Iloilo, Ilocos Norte, Leyte, Pangasinan, Batangas, Albay, and Cagayan. The total number of laborers registered in 1918 was 5,992 as compared with 7,056 in 1917, and the total number accommodated for the respective years was 5,736 and 5,385.

Interisland migration.

The number of emigrants sent during the year by the bureau's employment agencies was 7,919, of which 234 were sent by private concerns. This means an increase of 78.27 per cent in the interisland migration of laborers, as only 4,442 migrated in 1917. It is pleasing to note such a progress, for the proper distribution of labor will surely do much for the economic development of the country and the betterment of the conditions of workingmen. That the legislature is not unmindful of this fact is shown by the greater appropriation, amounting to ₱350,000, made for this purpose this year as compared with the sum of ₱200,000 appropriated last year. It is hoped that the funds made available for this undertaking be increased every year, considering the importance of the matter. In this connection it should be mentioned that during 1918 a total of 2,761 Filipinos emigrated to Hawaii. This drain in our laborers will, if it continues, undoubtedly prove prejudicial to the interests of the country, and it is believed that better inducements and more liberal terms to compete with those given by the Hawaiian Sugar Planters' Association should now be offered to laborers in the way of interisland migrations in the Philippines.

Strikes.

During the period covered by this report, 84 strikes, involving 16,289 workers, occurred in different parts of the islands. Sixty-three of these strikes, as against 37 of the previous year, occurred in Manila alone, covering 10,046 men and 1,007 women. The principal cause for these labor disturbances was, as usual, the continued and accelerated high cost of living. Through the intervention of the bureau of labor, 63 of these strikes were amicably settled and 21 were withdrawn.

Committee on conciliation and arbitration.

Worthy of being mentioned was the formation of this body during the early part of last year. The first of its kind in the Philippines, this committee was due to the initiative of the Union de Tabaqueros de Filipinas in behalf of the laborers, and the Manila Tobacco Association, which represented the cigar factories in this city. On the request of both parties, the inaugural meeting was presided over by the Hon. Manuel L. Quezon as intermediary. The most important agreement entered into by the above-named entities was that each shall appoint three representatives who shall constitute a "Committee on Conciliation and Arbitration," to which shall be referred for decision all questions arising between employers and employees, it being prohibited to both parties the taking of radical measures without first submitting their controversies to said committee. The decision of the committee in order to be binding must be approved by at least two members of the representatives for each party. The committee can also appoint an arbiter, whose decisions shall be compulsory to both sides.

In the words of President Quezon, this "compromise" entered into by the Manila Tobacco Association and the Union de Tabaqueros de Filipinas carries within itself an inestimable merit, it being the first decided step ever taken in these islands toward a clear understanding between capital and labor.

Trade associations and labor unions.

According to the investigation conducted by the bureau of labor, the total number of labor societies in Manila at the close of 1918 was 143, representing 147,331 members. Eighty-four of these unions have as their chief aim the mutual cooperation among the members. This manifestly shows that the Filipino laborer has come to realize the value of social consciousness and is fast learning to protect his own interests.

BUREAU OF COAST AND GEODETIC SURVEY.

ORGANIZATION AND PERSONNEL.

This bureau possesses a computing division, the work of which is the checking of all field computations, the adjustment of triangulations, the reduction of tidal observations, and the like; a drafting and geographical division, which is in charge of the making of charts and maps; and a nautical division, which attends to the sale of charts and the publication of Notices to Mariners and the Sailing Directions and Coast Pilots of the Philippine Islands.

With the exception of the director, who has always been an American, being an officer of the United States Coast and Geodetic Survey, the personnel of the bureau has been entirely Filipino since 1917, numbering 26 in all as compared with 4 Americans and 24 Filipinos in 1913, 4 Americans and 23 Filipinos in the years 1914 and 1915, and 1 American and 25 Filipinos in 1916.

ACTIVITIES OF THE BUREAU.

Three surveying ships—the *Pathfinder*, the *Fathomer*, and the *Romblo*—were operated by the bureau during the year. The work accomplished by these ships from July 1, 1918, to December 31, 1918, is shown in the attached table.

	Pathfinder.	Fathomer.	Romblon.	Total.
Triangulation:				
Square miles of area covered.....	122.0		115.2	237.2
Signals and scaffolds erected.....	11.0		1.0	12.0
Station occupied (horizontal angles).....	26.0	8.0	8.0	42.0
Geographical position determined.....	24.0	8.0	8.0	40.0
Station occupied (vertical angles).....	5.0			5.0
Bench marks established.....			2.0	2.0
Topography:				
Square miles area covered.....	404.0	.2	95.4	499.6
Miles of coast line surveyed.....	98.0	6.0	49.8	153.8
Miles of rivers and creeks surveyed.....	56.0		1.7	57.7
Miles of roads surveyed.....	22.0			22.0
Topographic sheets completed.....	7.0	1.0	2.0	10.0
Hydrography:				
Square miles of area sounded.....	276.0	1,030.3	420.3	1,726.6
Miles run while sounding.....	2,732.6	1,445.9	2,668.1	6,846.6
Number of soundings made.....	54,678.0	5,666.0	22,897.0	83,241.0
Tidal stations established.....	12.0		2.0	14.0
Current stations.....	1.0			1.0
Hydrographic sheets completed.....	4.0	2.0	1.0	7.0
Number of days in the field.....	138.0	70.0	121.0	

NOTE.—All distances are in statute miles.

In general the operations of the bureau were greatly handicapped throughout the year owing to the increased cost of supplies and the transfer of officers of the United States Coast and Geodetic Survey to active service with the Army and Navy.

RECOMMENDATIONS.

Before concluding this report the undersigned respectfully submits the following recommendations, based upon the experience of the different bureaus under this department. Some of these recommendations have already been made on previous occasions, but they are here reiterated:

1. That the Government equipment for port works be continually increased, as the growing commercial activities of the Philippines demand that a more ambitious program along this line should be undertaken every year.
2. That greater appropriations be made for the construction of radio stations in all important ports of the Philippines and in every populated island.
3. That liberal appropriations be made for the establishment of commercial agencies abroad.
4. That compulsory arbitration of labor disputes be established in the Philippine Islands.
5. That the appropriation for the encouragement of interisland migrations be increased each year, so as to enable the Government to offer better inducements for the proper distribution of laborers in the Philippines.

The reasons for the above recommendations are fully discussed in the reports of the bureaus under this department, the same being made a part hereof for more detailed information.

Respectfully submitted.

VICENTE MORENTE,

Acting Secretary of Commerce and Communications.

His excellency the GOVERNOR GENERAL,

Manila, P. I.

APRIL 30, 1919.

INDEX.

ARACA:

Area planted in: 163.
Production of: 163.

AGRICULTURE:

Acreage of land planted: 16, 163.
Conditions as to: 163.
Crop conditions: 16.
Food-production campaign: 164.
Pest control: 164.
Publications: 166.
Rural credits: 166.
Schools: 105.

AGRICULTURE AND NATURAL RESOURCES, report of secretary: 153.

AGRICULTURAL COLONIES, report on: 86, 193.

AGRICULTURAL SCHOOLS, location of: 13.

AGUSAN PROVINCE, conditions in: 79.

ALBERT, HON. ALEJANDRO, undersecretary: 12.

ALCOHOLIC PRODUCTS, output of: 142.

AMERICAN EMPLOYEES, administration of estates of deceased: 153.

AMERICANS, number of employees: 9.

ANGCOT DOMINGO (OUTLAW), surrender of: 12.

ANIMALS, insurance of: 166.

APACIBLE, HON. GALICANO, secretary of agriculture and natural resources: 16.

ARRASTRE PLANT, work of: 138.

ARTESIAN WELLS, number in operation: 112.

ASSESSMENT, real property: 11, 41.

AUTOMOBILES, importation: 135.

BAGUIO, government of: 47.

BANKS:

Agricultural, transfer of assets and liabilities: 132.

Capital and deposits: 144.

Deposits in: 15.

List of: 131.

Resources and liabilities: 132.

BARRETTTO, HON. ALBERTA, secretary of finances: 14.

BERIBERI, treatment of: 184.

BLIND, school for: 109.

BONDED INDEBTEDNESS, statement of: 130.

BONDS, issues of: 130.

BRIDGES:

Construction of: 201.

Number of: 201.

BUDGET, consolidated statement: 10.

BUDGET SYSTEM, success of: 124.

BUILDINGS, construction of: 202.

BUILDING AND LOAN ASSOCIATIONS, list of: 131.

BUKIDNON PROVINCE, conditions in: 80.

BUSINESS, condition of: 18.

CADASTRAL SURVEYS, work done: 179.

CARMEN, railroad extension to: 8.

CARPENTER, FRANK W., report of: 11.

CATTLE, diseases of: 165.

CEDULAS:

Amount collected: 145.

Collections from: 140.

CEMETERIES, provincial: 112.

CHINESE, number admitted: 138.

CHOLERA :

Appearance of: 13.

Cases of: 111.

Deaths from: 111.

CIGARS :

Exports: 15.

Production of: 143.

CIGARETTES, production of: 143.**CIVIL SERVICE, examinations and appointments: 9.****COAL, importation: 135.****COAL CLAIMS, number of: 176.****COAL LANDS, leases: 176.****COAST AND GEODETIC SURVEY, work of bureau: 18, 210.****COCONUTS :**

Area planted in: 164.

Production: 164.

COCONUT OIL, exportation: 136.**COMMERCE :**

Foreign carrying trade: 133.

School of: 108.

Trade with the United States: 134.

Value of: 14, 133.

COMMERCE AND COMMUNICATIONS, report of secretary: 199.**COMMERCE AND INDUSTRY, BUREAU OF:**

Creation of: 17.

Work of: 105.

CONSTABULARY, work of: 43.**CONSULAR WORK, statement of: 139.****COPRA, exportation: 136.****CORN :**

Area planted in: 164.

Production of: 164.

CORPORATIONS, registration of: 207.**CORPUS, HON. RAFAEL, undersecretary: 16.****COTABATO PROVINCE, conditions in: 81.****COTTON, importation: 134.****COUNCIL OF DEFENSE:**

Composition of: 5.

Work of: 6.

COUNCIL OF STATE, organization of: 6.**COURTS, work of: 147.****CURRENCY :**

Amount in circulation: 16.

Circulation of: 124, 131.

Circulation: 131.

CURRENCY RESERVE FUND:

Amount of: 124.

Composition of: 15.

Statement of: 123.

CUSTOMS :

Collections, source of: 137.

Receipts: 14.

CUSTOMS SERVICE, work of: 137.**DAVAO PROVINCE, conditions in: 81.****DEAF, school for: 109.****DENTAL EXAMINERS, board of: 46.****DEPOSITORIES:**

Cash balances: 126.

List of: 127.

DISTILLED SPIRITS, output: 15.**EDUCATION :**

Agriculture, institutions for the study of: 13.

Agricultural schools: 105.

Appropriations for: 12, 103.

Deaf and blind school: 109.

English language, progress made: 109.

Expenditures for: 123.

EDUCATION—Continued.

- Mindanao and Sulu: 75-76.
- Nautical school: 107.
- Non-Christians: 109.
- Normal schools: 13, 105.
- Physical training: 108.
- Private schools: 118.
- School buildings, construction of: 104.
- School of commerce: 108.
- Schools, number of: 13.
- Teachers, increase in number of: —.
- Trade schools: 107.

EMBROIDERIES, exportation: 136.

EMIGRANTS, number of: 209.

EMPLOYEES:

- Administration of estates of deceased Americans: 153.
- Number of: 9.

EMPLOYMENT AGENCIES, work of: 209.

ENGLISH LANGUAGE, use of: 109.

EPIDEMICS:

- Cholera: 111.
- Influenza: 111.
- Smallpox: 110.

ESCALER, HON. JOSE, undersecretary: 18.

EXCISE TAX, collections from: 139.

EXECUTIVE BUREAU, work of: 12, 41.

EXPORTS, value of: 15.

EXPENDITURES, statement of: 121.

EXPENSES, insular government: 10.

EXPORTS, value of: 133, 133.

FERMENTED LIQUORS, quantity: 143.

FINANCES, insular government: 9.

FINANCE:

- Report of secretary: 121.
- Statistics: 121.

FISHER, JUSTICE FRED C., resignation of: 18.

FISHERIES, collections: 186.

FOOD AND DRUG INSPECTIONS, work done: 113.

FOOD-PRODUCTION CAMPAIGN, result of: 196.

FOOD PRODUCTS, importation: 135.

FORESTRY BUREAU:

- Recommendations: 172.
- Work of: 167.

FRANCHISE TAXES:

- Amount of: 140.
- Amount collected: 145.
- Collections: 15.

FRIAR LANDS, administration of: 176.

GERMAN VESSELS, charter of: 206.

GLORIA, HON. DIEGO, appointment of: 14.

GOLD BULLION, exportation: 137.

GOLD STANDARD FUND:

- Disposition of: 15.
- Statement of: 128.

HARRISON, FRANCIS BURTON, absence of: 18.

HEALTH, PUBLIC, expenditures for: 123.

HEALTH SERVICE:

- Report on: 110.
- Work of: 18.

HEMP, exportation: 136.

HOMESTEADS, applications for: 174.

HOSPITALS, construction of: 112.

ICE PLANT, operation of: 209.

IMMIGRANTS:

- Medical inspection: 115.
- Number of: 138.

IMPORTS:

Conditions as to: 184.

Value of: 15, 133.

INCOME, statement of: 121.**INCOME TAX:**

Amount of: 140.

Collections: 15, 145.

INFANTS, welfare work: 112.**INFLUENZA:**

Cases of: 111.

Deaths from: 111.

Epidemic of: 13.

INSULAR GOVERNMENT, finances of: 9.**INSURANCE COMPANIES:**

Amount issued: 144.

Number of: 132.

INTERIOR, DEPARTMENT OF:

Conditions in inlands: 34.

Executive bureau, work of: 41.

General operation and activity: 35.

Law and order: 36.

Legislation: 32.

Non-Christian territory and inhabitants: 38.

Organization: 31.

Organized Provinces and municipalities: 37.

Personnel: 31.

Policy: 32.

Report of: 31.

Secretary of: 11.

INTERNAL REVENUE:

Apportionment of taxes: 140.

Collections: 15, 139.

Cost of collection: 142.

Excise taxes: 139.

License taxes: 139.

IRON AND STEEL, importation: 134.**IRRIGATION WORKS, construction of:** 203.**IWAHIG PENAL COLONY, improvements at:** 14.**JAKOSALEM, HON. DIONISIO, secretary of commerce and communications:** 17.**JAPANESE:**

Number in Mindanao and Sulu: 85.

Plantations owned by: 85.

JOHNSTON, HON. CARTER D., resignation of: 14.**JOURNAL OF SCIENCE, publication of:** 183.**JUSTICE:**

Bureau of, work of: 152.

Report of secretary of: 147.

JUSTICE, DEPARTMENT OF, secretary of: 13.**KALOW, HON. TEODORO M., undersecretary:** 11.**LABOR, BUREAU OF, work of:** 209.**LANAO PROVINCE, conditions in:** 82.**LANDS:**

Law division, work of: 178.

Leases: 175.

Registration of: 150.

Sales: 174.

Work of bureau of: 173.

LAND REGISTRATION, work done: 149.**LAW AND ORDER, conditions as to:** 36.**LEATHER GOODS, importation:** 135.**LEPERS, number released:** 112.**LICENSE TAXES, collections from:** 139.**LONG, DR. J. D., retirement of:** 113.**MAGEE, CHARLES H., absence of:** 18.**MANILA:**

Government of: 47.

Port works: 17.

MANILA RAILROAD Co.:

Construction work completed: 8.

Operating expenses: 7.

Revenue: 7.

Rolling stock, condition of: 8.

MATA, HON. VICTORINA, secretary of justice: 13.**MATCHES, quantity consumed:** 144.**McQUAIDE, T. J., appointment of:** 118.**McMAHON, HON. WILLIAM E., resignation of:** 14.**MEDICAL EXAMINERS, board of:** 46.**MINDANAO AND SULU, DEPARTMENT OF:**

Agricultural colonies: 86.

Agriculture: 84.

Agusan Province: 79.

Banks: 93.

Bukidnon Province: 80.

Commerce and shipping: 91.

Conditions in: 55.

Corporations, organization of: 86.

Cotabato Province: 81.

Davao Province: 81.

Exports and imports: 91.

Finance: 55.

Fishing industry: 91.

Forests: 89.

Immigration: 98.

Inspections: 98.

Japanese—

Plantations owned by: 85.

Population: 85.

Immigration: 85.

Justice: 72.

Lanao Province: 82.

Legislation: 50.

Live stock, number of: 86.

Manufactures: 92.

Marine products: 90.

Mineral products: 90.

Missions: 94.

Organization: 53.

Pearl fisheries: 91.

Personnel: 95.

Plantations—

Acreage of: 85.

Sold to Japanese: 85.

Policy of government: 52.

Political conditions: 95.

Population: 50.

Public health: 74.

Public instruction: 75.

Schools, number of: 76.

Teachers, number of: 76.

Public lands: 88.

Public order: 70.

Prisons: 78.

Public works: 79.

Recommendations: 98.

Sponge fisheries: 91.

Sulu Province: 83.

Territorial jurisdiction: 49.

Trading systems: 90.

Zamboanga Province: 83.

MINES:

Development of: 189.

Work of division of: 188.

MINT, establishment of: 124.**MOIR, JUDGE PERRY M., appointment of:** 13.

- MONEY, circulation of: 16.
- MONEY ORDERS, number issued: 204.
- MONREAL, DR. G. B., appointment of: 14.
- MORENTE, HON. VICENTE, undersecretary: 17.
- MOTOR VEHICLES, registration of: 18, 203.
- MUNICIPALITIES:
 - Government of: 37.
 - Number organized: 12.
 - Organization of: 42.
- NATIONAL COAL Co.:
 - Balance sheet: 21.
 - Capital stock—
 - Status of: 19.
 - Subscriptions to: 20.
 - Coal analysis: 26.
 - Government stock in: 123.
 - Operating expenses: 25.
 - Price of coal: 8.
 - Report of: 19-29.
 - Work of: 8.
- NON-CHRISTIANS, schools for: 109.
- NON-CHRISTIAN TRIBES:
 - Organization of territory of: 88.
 - Policy of Government toward: 88.
 - Work of bureau of: 43.
- O'MALLEY, M. H., resignation of: 118.
- OPTICAL EXAMINERS, board of: 46.
- ORPHANAGE, government: 45.
- PALMA, HON. RAFAEL, secretary of the interior: 11.
- PARCEL POST CONVENTIONS, conclusion of: 18.
- PEARL FISHERIES, collections from: 145.
- Value of: 91.
- PESTS:
 - Control of: 164.
 - Measures against: 16.
- PHARMACEUTICAL EXAMINERS, board of: 46.
- PHILIPPINE CONSTABULARY:
 - Officers: 12.
 - Work of: 12.
- PHILIPPINE GENERAL HOSPITAL, work of: 44.
- PHILIPPINE LEGISLATURE, work of: 8.
- PHILIPPINE LIBRARY AND MUSEUM, report on: 158.
- PHILIPPINE NATIONAL BANK:
 - Branches organized: 7.
 - Profits: 7.
 - Resources: 7.
 - Stock in: 123.
- PHILIPPINE NATIONAL GUARD:
 - Officers of: 6.
 - Organization of: 6.
- PHILIPPINE RAILWAY Co., bond issues: 130.
- PHYSICAL EDUCATION, training in: 108.
- PLAGUE, cases of: 112.
- PLANTATIONS, Japanese owned: 85.
- POLICE, number of: 44.
- PORT WORKS:
 - Construction of: 17-18.
 - Progress on: 201.
- POSTS, BUREAU OF:
 - Earnings of: 18.
 - Work of: 203.
- POST OFFICES, number of: 203.
- POSTAL SAVINGS BANKS:
 - Deposits: 204.
 - Number of: 203.

- POWELL, HON. JOHN S., resignation of: 14.
- PRINTING BUREAU, work of: 145.
- PRISONS:
 - Number of inmates: 14.
 - Report on: 154.
- PRISONERS, number of: 154.
- PRIVATE SCHOOLS, report on: 118.
- PROVINCES, government of: 37.
- PROVINCIAL FISCALS, resignations and appointments: 154.
- PUBLIC INSTRUCTION, report of secretary: 103-120.
- PUBLIC INSTRUCTION, DEPARTMENT OF, secretary of: 12.
- PUBLIC UTILITY COMMISSION, work of: 151.
- PUBLIC WELFARE BOARD, work of: 46.
- PUBLIC WORKS, BUREAU OF, work of: 199.
- QUARANTINE:
 - Consular: 115.
 - Fumigation and disinfection of vessels: 115.
- QUARANTINE SERVICE:
 - Needs of: 116.
 - Stations, work done at: 116.
 - Work of: 113.
- RADIO OFFICES, number of: 203.
- RAFFERTY, JAMES J., appointment of: 17.
- RAILROADS:
 - Bonds: 130.
 - See Manila Railroad: 8.
- REYES, FIDEL A., appointment of: 17.
- REYES, PONCIANO, death of: 14.
- RICE:
 - Acreage planted in: 16.
 - Cultivation of: 16.
 - Importation free of duty: 205.
 - Imports: 135.
 - Production of: 163.
- RICE COLONIES, report on: 195.
- RINDERPEST:
 - Cases of: 16, 165.
 - Measures against: 165.
- ROADS:
 - Construction of: 17, 200.
 - Length of: 200.
- RURAL CREDITS, work of associations: 166.
- SAN AGUSTIN, PRIMITIVO, appointment of: 14.
- SANITATION:
 - Conditions in the Orient: 114.
 - Work in Provinces: 112.
- SAN LAZARO ESTATE, condition of: 177.
- SAWMILLS, work of: 169.
- SCHOOLS. (See Education.)
- SCIENCE, BUREAU OF, work of: 182.
- SECRET SERVICE, work of: 138.
- SILVER CERTIFICATES, disposition of: 15.
- SILVER-CERTIFICATE RESERVE FUND, statement of: 128.
- SILVER ORE, exportation: 137.
- SMALLPOX:
 - Cases, number of: 13, 110.
 - Deaths, number of: 13, 110.
 - Vaccinations: 110.
- SOUTHWORTH, HON. LOUIS M., appointment of: 14.
- SPONGE FISHERIES:
 - Collections: 145.
 - Value of: 91.
- STILLS, number in operation: 142.
- STOCK FARMS, report on: 198.
- STRIKES:
 - Arbitration: 210.
 - Number of: 210.

SUGAR:

Area planted in: 164.

Exportation: 136.

Production: 164.

SULU PROVINCE, conditions in: 83.**SUPPLIES, BUREAU OF, work of:** 18, 208.**SUPREME COURT, work of:** 147.**SURVEYS, land:** 179.**TAXES, internal revenue, apportionment of:** 140.**TAYUG, railroad to San Quintin:** 8.**TEACHERS.** (*See Education.*)**TELEGRAPH LINES, mileage of:** 204.**TELEGRAPH OFFICES, number of:** 203.**THOMPSON, C. J., resignation of:** 14.**THOMPSON, DR. T. R., appointment of:** 113.**TIKITIKI, manufacture of extract:** 184.**TOBACCO:**

Area planted in: 164.

Export: 136.

Output: 15.

Production: 164.

Quantity taxed: 143.

TRADE SCHOOLS, work of: 107.**TREASURY:**

Amount in: 15.

Cash account: 124.

Condition of: 123.

Funds, distribution of: 123.

Investments: 130.

TUBERCULOSIS, cases of: 112.**UNSON, HON. MIGUEL, undersecretary:** 14.**VACCINATION, campaign of:** 13.**WATERWORKS, construction of:** 202.**WEATHER BUREAU, work of:** 190.**WELLS, artesian, number in operation:** 112.**WINES:**

Consumption of: 143.

Taxes on: 143.

YEATER, CHARLES E.:

Report of: 103-120.

Secretary of public instruction: 12.

ZAMBOANGA PROVINCE, condition in: 83.

RETURN TO the circulation desk of any
University of California Library
or to the
NORTHERN REGIONAL LIBRARY FACILITY
Bldg. 400, Richmond Field Station
University of California
Richmond, CA 94804-4698

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

- 2-month loans may be renewed by calling (510) 642-6753
 - 1-year loans may be recharged by bringing books to NRLF
 - Renewals and recharges may be made 4 days prior to due date.
-

DUE AS STAMPED BELOW

SEP 12 2003

12,000 (11/95)